

NOTE TO USERS

Copyrighted materials in this document have not been scanned at the request of the author. They are available for consultation in the author's university library.

189-192

This reproduction is the best copy available.

UMI[®]



uOttawa

L'Université canadienne
Canada's university

FACULTÉ DES ÉTUDES SUPÉRIEURES
ET POSTDOCTORALES



FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES

Darlene Foucault

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

Ph.D. (Psychology)

GRADE / DEGREE

School of Psychology

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

Environment, Culture, Parenting, and Children's Development in an Impoverished Latin American Society

TITRE DE LA THÈSE / TITLE OF THESIS

Barry Schneider

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Tim Aubry

Robert Flynn

Nicole Lyn Létourneau

Alastair Younger

Gary W. Slater

LE DOYEN DE LA FACULTÉ DES ÉTUDES SUPÉRIEURES ET POSTDOCTORALES /
DEAN OF THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

Environment, Culture, Parenting, and Children's Development
in an Impoverished Latin American Society

Darlene C. Foucault

A Thesis submitted to the School of Graduate Studies
of the University of Ottawa as partial fulfilment of the requirements
for the degree of Doctor of Philosophy



Library and
Archives Canada

Bibliothèque et
Archives Canada

Published Heritage
Branch

Direction du
Patrimoine de l'édition

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

ISBN: 0-494-10966-1

Our file Notre référence

ISBN: 0-494-10966-1

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

Dedications

This thesis is dedicated to my family. My parents Johanne Lapierre and Rodolp Foucault have instilled in me the values of perseverance, respect, and love of others and taught me to never lose sight of my goals but to ensure that any of my pursuits are for the better of all. These values and teachings served as both my inspiration and my guide throughout this research undertaking. I was also privileged to be able to share this research endeavour with my parents and my sister Tracey-Lynn who came out to the Dominican Republic in order to distribute clothing and medical supplies to the impoverished families as well as assist with returning my data to Canada. In addition, I am grateful to my cousin Carole for her continued support and friendship. My goddaughters Mélanie and Alexie are credited with filling our lives with love and joy. My husband, Laird Cole, whom I met during the writing process, has been an encouraging presence. Thank you all for your support and your interest in this project. Now that this undertaking is completed I look forward to experiencing new adventures with all of you. Let the fun begin!

I also dedicate this thesis to the many Dominican families who welcomed me into their homes and their lives. Many of these mothers and children shared with me their precious time as well as limited resources (e.g., food), even if it meant their having to do without. Indeed, their ability to be kind, welcoming, and trusting in spite of their many life challenges serves as a model for me to emulate. They have undoubtedly influenced how I live my life and think about the world in more ways than I can express.

In addition, I wish to dedicate this thesis to family members who are greatly missed. Even in death, my brother Richard continues to inspire me and serves as a reminder of the strength of family ties. My grandmother, Desneige Lapierre, has instilled in me the desire to give the best of myself, whereas my grandmother Cecile Foucault has inspired me to live life fully and to fear only boredom.

Acknowledgements

This process would not have been possible without the endorsement of this research project by my thesis advisor, Dr. Barry Schneider. He believed sufficiently in the value of this research undertaking to facilitate my departure for the Dominican Republic for over a year. Dr. Schneider expressed his support in many meaningful ways, such as his visit to the Dominican Republic, providing funding for the data entry, as well as his objectivity and practicality when my enthusiasm and passion for this research project risked compromising its completion. I am grateful for the support and advice of Dr. Aubry, Dr. Flynn, and Dr. Younger as thesis committee members. I am also appreciative of the encouraging feedback provided by Dr. Letourneau, my external advisor.

I would also like to express gratitude to the Sisters from Solidarité Jeunesse who introduced me to work in the Dominican Republic, facilitated my return, and hosted my stay. Among these, special thanks go out to Sister Claudette, Sister Fernande, Sister Louise, and Sister Colombe. In addition, I am thankful to Juan Francisco de la Rosa Perez, a Dominican teacher and friend, who assisted me with the translation of measures as well as daily survival in my host country. I credit Dr. Carruthers, a colleague, for my survival of the final stages of my thesis process.

Finally, thanks also go out to friends who have supported me throughout the various steps of this process. Nelly, Joan, Carl et Marie-Hélène, je vous remercie pour votre amitié.

Abstract

This study investigated the effects of the Socioeconomic status (SES) community on the physical and social environment, maternal psychology, parenting values, parenting practices, and child development. It examined whether the effects of poverty as is noted in mostly North American research would be replicated in a collectivistic Latin society such as the Dominican Republic. The participants were 80 three year-olds, 154 six year-olds, 141 eight year-olds and their primary caregivers, with participants equally divided between the Campos (small agricultural villages) and higher SES San Cristobal. Maternal figures completed the Brief Symptom Inventory (BSI), Parenting Stress Index- Short Form (PSI-SF), Interpersonal Support Evaluation List (ISEL), Rank Order of Parental Values (ROPV), Child Development Inventory (CDI), and Strengths and Difficulties Questionnaire (SDQ). During a home visit, the researcher completed the Home Observation and Measurement of the Environment (HOME) Inventory and obtained information to fill out the physical and social environment measures. The Self-Perception for Children and the Peer Nomination and Assessment measures were administered to the children in the school setting. Teachers also completed the SDQ and provided information on children's academic performance. MANOVAs confirmed our first hypothesis that the Campos and San Cristobal environments are significantly different ($p < .001$) on all measures of the physical and social environment, with San Cristobal children benefiting overall from a better developmental context. Secondly, Campos mothers reported significantly ($p < .001$) more interpersonal support and less parental distress relative to their more affluent counterparts. These findings are contrary to those of present North-American research. We propose that belonging to a collectivistic culture may shield mothers from some of the pernicious effects of poverty. An examination of the SES/community effect demonstrated that San Cristobal parents provide a

more stimulating ($p < .001$) and emotionally supportive ($p < .001$) HOME environment for their children than do Campos parents. MANOVAs conducted on child outcome measures revealed that Campos children were weaker than their San Cristobal counterparts on most developmental scales and all academic subjects ($p < .001$). Also, San Cristobal parents reported more prosocial behaviours for their children relative to Campos parents ($p < .001$), and San Cristobal children reported a more positive view of their social interactions and abilities as well as more satisfaction with their lives ($p < .001$) than the less affluent Campos children. The poorer developmental outcomes and lower self-perceptions obtained by lower-SES Campos children support findings in the current North-American literature. However, the presence of more prosocial behaviours among higher-SES San Cristobal children is contrary to our predictions. Thirdly, parents in the two SES environments differed significantly on their parenting values ($p < .001$), with Campos mothers endorsing a greater preference for conformity relative to San Cristobal mothers, whose preference for self-direction was associated with the provision of a more emotionally supportive HOME environment. Lastly, results from regression analyses revealed that after considering age, gender, and maternal variables, the quality of the HOME and family environment were the better predictors of children's optimal development. For instance, among Campos children, their development was best explained by the provision of a cognitively stimulating HOME environment, whereas the presence of an emotionally supportive HOME environment best explained children's socioemotional adjustment and a positive social and personal self-perception. These results are consistent with current North-American studies on the pathways of influence between poverty and child development. Lastly, the quality of the parent-child relationship was best explained parents' perceptions of their child ($p < .001$). Indeed, a loving

and supportive relationship between parent and child can buffer against the pernicious effects of impoverishment. Therefore, what parents do matters.

Table of Contents

Dedications	ii
Acknowledgements	iii
Abstract	iv
List of Figures	xi
List of Tables	xii
INTRODUCTION	1
Prevalence of Poverty	3
Physical and Social Setting of Poverty: Exosystem, Mesosystem, and Microsystem	4
Cultural Influences on the Physical and Social Setting of Poverty	6
Parenting in Context: Values, Goals, and Behaviours	7
Parental World View	7
Adaptation Needs and Survival Skills	7
Workplace Experiences and Social Status	11
Neighbourhood Characteristics and Resources	12
Perceived Value of Children	13
Access to Information	13
Parent Characteristics	15
Child Development and Adjustment in the SES and Cultural Context	17
Cognitive and Academic Achievement	17
Socioemotional Adjustment	19
Paths of Influence: Mediating Variables	22
Cognitive Development/ Academic Competence	22
Socioemotional Adjustment	26
OBJECTIVES	29
HYPOTHESES	33
Hypothesis 1	33
Hypothesis 2	33
Hypothesis 3	33
Hypothesis 4	34
Hypothesis 5	34
METHOD	35
Participants	35
Procedure	37
Measures	40
Translation Procedure	40
SES Measures	40
Physical and Social Environment Measures	42
Housing Quality scale	42
Neighbourhood scale	45
Educational Opportunity scale	46
Measures of Maternal Parenting Stress, Psychological Adjustment, and Social Support	48
Parenting Stress Index-Short Form	48
Brief Symptom Inventory	49
Interpersonal Support Evaluation List	52
Measure of Maternal Values	54
Kohn's Rank Order of Parental Values	54

Tables of Contents continued

Measures of the Family Environment.....	54
Home Observation for Measurement of the Environment.....	54
Infant/ toddler HOME inventory.....	56
HOME inventory for families of pre-school age children.....	57
Middle childhood HOME inventory.....	58
Amalgamation of HOME scales.....	59
Measures of Child Development: Development scales, Socioemotional Adjustment, Self-Perception, Interpersonal Skills, and Academic Achievement.....	61
Child Development Inventory.....	61
Strengths and Difficulties Questionnaire.....	62
SDQ- parent version.....	64
SDQ- teacher version.....	65
Peer Nomination.....	65
Sociometric Choice Nominations/ Peer Assessment.....	66
Self-Perception Profile for Children (8-12 years).....	67
Academic Achievement.....	70
RESULTS.....	70
Correction for Multiple Comparisons.....	71
Variable Transformation.....	72
Physical and Social Environment of Poverty.....	74
Intercorrelations among Physical and Social Environment Measures.....	74
SES/Community Differences.....	74
Differences in Maternal Psychological Adjustment, Parenting Stress, Social Support, and Parenting Values by SES/Community.....	77
Maternal Social Support, Parenting Stress, and Psychological Adjustment.....	79
Intercorrelations between Physical and Social Environment Measures and Maternal Social Support, Parenting Stress, and Psychological Adjustment Variables.....	79
Maternal Social Support, Parenting Stress, and Psychological Adjustment by SES/community.....	79
Maternal Parenting Values.....	82
Intercorrelations between Parental Values and Social Class Indicators and Physical and Social Environment Measures.....	82
Maternal Parenting Values by SES/community.....	82
Parenting Practices and Parent-Child Relationship.....	85
Intercorrelations among Physical and Social Environment Measures and Parenting Practices and Parent-Child Relationship.....	85
Parenting Practices and Parent-Child Relationship by SES/community.....	85
Differences in Child Development by SES/community.....	88
Child Development Outcomes.....	88
Intercorrelations among Physical and Social Environment Measures and Child Outcome Variables.....	88
Child Development by SES/Community.....	88
Relationship between Parenting Values and the Quality of the HOME and Family Environment.....	98

Table of Contents continued

Inter correlations between Parenting Values and HOME and Family Environment variables	98
Regression Analyses Predicting HOME and Family Characteristics with Maternal Parenting Values	98
Contribution of Maternal Characteristics, HOME Environment, and Parent-Child Relationship to Child Development	100
Inter correlations between Predictor Variables and Outcome Variables	100
Regression Analyses Predicting Child Outcome Variables	105
Regression analyses predicting child development	105
Regression analyses predicting child socioemotional adjustment	110
Regression analyses predicting child prosocial behaviour	112
Regression analyses predicting peer nominations of social behaviour and sociometric choice nominations	115
Regression analyses predicting children's self-perception	115
Regression analysis predicting academic achievement	118
DISCUSSION	118
The Context of Poverty in the Dominican Republic	118
Influence of the Impoverished Dominican Physical and Social Environment on Maternal Psychology, Parenting Values, and Parenting Practices	120
Maternal Psychology	120
Social support	120
Parenting stress	122
Psychological adjustment	123
Maternal Parenting Values	125
Parenting Practices	127
Link among the Three Components of the Developmental Niche: Physical and Social Environment, Caregiver Psychology, and Parenting Practices	129
Link between Parenting Values and Parenting Practices	129
Link between Physical and Social Environment, Maternal Psychology, and Parenting Practices	129
Developmental Niche and Children's Development and Adjustment	131
Characteristics of the Physical and Social Environment and Children's Development	131
Gender Differences	134
Age Differences	135
Caregiver Psychology and Parenting Practices, and Child Development and Adjustment	136
Child Development	136
Socioemotional Adjustment	138
Prosocial Behaviours	139
Self-Perception	140
Protective Functions of the Developmental Niche Dimensions	141
Caregiver Tasks	142
Limits of the Present Study and Future Research Directions	144
CONCLUSIONS	149
References	153

Table of contents continued

Appendix A: Neighbourhood of Residence of Children and Mothers	165
Appendix B1: House-Material Quality scale-Percentage by SES/community	167
Appendix B2: Neighbourhood scale- Percentage by SES/community	170
Appendix B3: Educational Opportunity scale - Percentage by SES/community	173
Appendix C: Consent Forms	176
Appendix D1: Housing Quality scale	178
Appendix D2: House-Material Quality scale	179
Appendix E1: Neighbourhood scale	180
Appendix E2: Dimensions of the Neighbourhood scale	181
Appendix F: Educational Opportunity scale	182
Appendix G1: Parenting Stress Index- Short Form	183
Appendix G2: Factor Structure of the Parenting Stress Index- Short Form	187
Appendix H1: Brief Symptom Inventory (BSI) scales	189
Appendix H2: Factor Analysis Results for the Brief Symptom Inventory (BSI)	193
Appendix I1: Interpersonal Support Evaluation List (ISEL)	196
Appendix I2: Factor Structure of the Interpersonal Support Evaluation List (ISEL)	199
Appendix J1: HOME Inventory (Infant/ Toddler Version)	201
Appendix J2: HOME Inventory (Early Childhood Version)	203
Appendix J3: HOME Inventory (Middle Childhood Version)	206
Appendix J4: HOME Inventory- Higher Order Factor Analysis	209
Appendix J5: HOME Inventory Composite scales	210
Appendix K: Child Development Inventory (CDI)	217
Appendix L1: Strengths and Difficulties Questionnaire- Parent Version	228
Appendix L2: Factor Structure of the Strengths and Difficulties Questionnaire- Parent Version	230
Appendix L3: Strengths and Difficulties Questionnaire- Teacher Version	232
Appendix L4: Factor Structure of the Strengths and Difficulties Questionnaire- Teacher Version	234
Appendix M1: Factor Loadings of the Items of the Peer Assessment	235
Appendix M2: Sociometric Choice Nomination Scales	236
Appendix N1: Self-perception Profile for Children	237
Appendix N2: Higher Order Factor Analysis: Self-perception Profile for Children	241
Appendix N3: Self-perception Scales	242
Appendix O: Variable Transformations	246
Appendix P: BSI T scores using nonpatient female norms	260

List of Figures

Figure 1	Hypothesized Paths of Influence between Poverty and Child Development among Dominican Children.....	31
Figure 2	House-Material Quality scale: Campos and San Cristobal.....	44
Figure 3	House-Material Quality scale: Campos.....	44
Figure 4	House-Material Quality scale: San Cristobal.....	45
Figure 5	Neighbourhood scale: Campos and San Cristobal.....	46
Figure 6	Educational Opportunity scale: Campos and San Cristobal.....	47

List of Tables

Table 1	Intercorrelations among Physical and Social Environment Measures.....	75
Table 2	Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) Results for Differences between SES/Communities on Four Physical and Social Environment Measures.....	76
Table 3	Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) Results for Difference between SES/Communities on Demographic Variables.....	78
Table 4	Intercorrelations of Physical and Social Environment Measures with Maternal Support, Parental Distress, and Psychological Adjustment.....	80
Table 5	Means, Stand Deviations, and One-Way Analyses of Variance (ANOVA) Results for Differences between SES/Communities on Measures of Maternal Social Support, Parenting Distress, and Psychological Adjustment.....	81
Table 6	Pearson Correlations: Parental Values with Social Class Indicators, Physical and Social Environment Measures, and HOME/ Family Characteristics.....	83
Table 7	Mean Rank of Parental Values by SES/Community.....	84
Table 8	Intercorrelations of Physical and Social Environment Measures with Parenting Practices and Parent Child Relationship.....	86
Table 9	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for the Quality of the HOME/ Family Environment of 3-8 year-olds as a Function of Gender and SES/Community.....	87
Table 10	Intercorrelations of Physical and Social Environment Measures with Child Development Variables (CDI).....	89
Table 11	Intercorrelations of Physical and Social Environment Measures with Children's Socioemotional Adjustment, Prosocial Behaviours, Peer Nominations, Sociometric Choice Nominations, Self-Perception, and Academic Achievement Variables.....	90
Table 12	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Development (CDI) of 3 and 6 year-olds as a Function of Gender and SES/Community.....	92

List of Tables continued

Table 13	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Behavioral Adjustment of 3-8 year-olds as a Function of Gender and SES/Community.....	93
Table 14	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Academic Achievement (Grades) of 6 and 8 year-olds as a Function of Gender and SES/Community.....	94
Table 15	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Peer Nominations and Sociometric Choice Nominations of 6 and 8 year-olds as a Function of Gender and SES/Community.....	96
Table 16	Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Self-Perception of 8 year-olds as a Function of Gender and SES/Community.....	97
Table 17	Summary of Multiple Regression Analysis for HOME and Family Variables at ages 3, 6, and 8 with Maternal Parenting Values.....	99
Table 18	Intercorrelations of SES/Community and Predictor Variables (Maternal Support, Parenting Stress, Psychological Adjustment, HOME scales, and Parent-Child Relationship).....	101
Table 19	Intercorrelations among Child Development Inventory (CDI) subscales.....	102
Table 20	Intercorrelations among Child Social Emotional Adjustment, Prosocial Behaviour, Self-Perception, Peer Nominations, Sociometric Choice Nominations, and Academic Achievement.....	103
Table 21	Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/ Family Variables.....	106
Table 22	Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/ Family Variables.....	107
Table 23	Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/ Family Variables.....	108

List of Tables continued

Table 24	Summary of Multiple Regression Analysis for Variables Predicting Child Emotional Adjustment (SDQ and PSI-SF) at Ages 3, 6, and 8 years with Maternal and HOME/Family Variables.....	111
Table 25	Summary of Multiple Regression Analysis for Variables Predicting Child Prosocial Behaviour (SDQ) at Ages 3, 6, and 8 years with Maternal and HOME/Family Variables.....	113
Table 26	Summary of Multiple Regression Analysis for Variables Predicting Peer Nominations and Sociometric Choice Nominations at Ages 6 and 8 years with Maternal and HOME/Family Variables.....	116
Table 27	Summary of Multiple Regression Analysis for Variables Predicting Child Self-Perception and Academic Achievement with Maternal and HOME/Family Variables.....	117

ENVIRONMENT, CULTURE, PARENTING, AND CHILDREN'S

DEVELOPMENT IN AN IMPOVERISHED LATIN AMERICAN SOCIETY

Bradley (1995) stipulates that optimal parenting requires five principal tasks: (1) sustenance, (2) stimulation, (3) support, (4) structure, and (5) surveillance. The developmental context must provide adequate nutrients and shelter to ensure survival and healthy development. Cognitive stimulation is required to influence children's neural development. Organized age-appropriate stimulation enables them to learn how to process information and regulate arousal. Optimal social/emotional development depends on the parents' ability to provide a responsive, rewarding, and warm environment in which parents affirm their children's worth and attend to their requests in a timely and predictable manner. Structure within the physical environment can also assist children in organising the information provided by the environment and facilitate the learning process. Living in crowded, unpredictable, disorganized, and uncontrollable conditions increases the likelihood of anxiety and maladaptive behaviours. In turn, stability and regularity are conducive to a more secure attachment between parent and child. Lastly, it is important that parents keep track of the adequacy of the environmental conditions for the security and development of their children. Through the surveillance process, parents monitor children's whereabouts and review whether the present environment is congruent with their personal and developmental needs and determine if new forms of sustenance, stimulation, support, and structure are required (Bradley, 1995).

Although these parenting tasks are presented as essential dimensions of the caregiver role, the manner in which they are implemented is influenced by the physical and social context within which parenting occurs. Harkness and Super (1995) use the term “developmental niche” in reference to children’s cultural environment. According to the authors, the developmental niche is the product of the interaction between three components: the physical and social setting of the child’s life; the caregiver psychology; and the culturally prescribed childrearing practices. They believe that it is from this multi-influenced developmental niche that children acquire culture-specific social, affective, and cognitive rules. In turn, Hoff-Ginsberg and Tardif (1995) contend that socioeconomic status (SES) also organizes children’s developmental niche. They propose that poverty determines the family’s physical and social setting, influences the caregivers’ wellbeing, and is also linked to preferred childcare practices.

In the following paragraphs, I will explain how culture and SES are thought to act as organising forces in the daily lives of parents and their offspring. To do so, I will first present the prevalence of poverty, followed by a description of the physical setting of poverty and the specific influence of culture on this impoverished physical environment. After presenting the influences acting on the environment in which parenting occurs, I will then attend to the links between contextual variables and parental values and goals and between the parental belief system and childrearing practices. Next, I will consider parental characteristics within both the cultural and SES environment, followed by a brief review of contextual influences on child development. Finally, I will review the selected paths of influence between the physical setting in which parenting occurs and child outcomes.

Prevalence of Poverty

In spite of many interventions and successes in the fight against poverty, a quarter of the world's inhabitants still live in extreme poverty. According to the World Report on Human Development (WRHD, 1997), more than one quarter of the inhabitants of developing countries still live in total destitution, with one third of these (1.3 billion individuals) needing to survive on an income of less than one dollar per day. Moreover, there are nearly a billion people who cannot read world-wide; more than one billion people do not have access to drinking water; some 840 million individuals experience hunger; and one third of the citizens of the least developed countries will die before the age of 40 years. In industrialized countries, 100 million people live below the poverty line, defined as half of the median individual income. Within these countries, poverty is best explained by the unemployment rate (WRHD, 1997).

Among those afflicted by poverty, certain groups are more severely affected. For instance, children are particularly vulnerable to the effects of poverty. Malnutrition and disease strike them at a crucial period for their mental and physical development. According to the WRHD (1997), some 160 million children residing in developing countries suffer from moderate to serious malnutrition. Approximately 110 million children do not have access to schooling.

Although millions of children in developing countries live in poverty, the issue has relevance beyond the Third World. For instance, at the present time, the US has the highest rate of child poverty among the world's industrialized nations. In 2000, approximately 16.2 % of US children under 18 lived in poverty (Duncan & Magnuson, 2003), with children under six and minority children (Fitzgerald, Lester, & Zuckerman, 1995; Magnuson & Duncan, 2003) being the

most likely to live below the poverty line. Poverty among American children is more prevalent than it was 25 years ago (Duncan & Magnuson, 2003).

Eighteen percent of Canadian citizens live under the poverty line (Canadian Council on Social Development, CCSD, 1996). Among these 5, 294, 000 people, 1, 498, 000 are children. Children constitute 28.3% of Canada's poor citizens, representing an increase from 21.1% in 1996 and 15.8% in 1980. Based on a review of empirical studies published between 1985 and 1993, Oberg, Bryant, and Bach (1995) concluded that the prevalence of poverty among children is on the rise and that living under conditions of destitution has negative repercussions for both physical and psychological development. Indeed, as I will suggest in the following paragraphs, poverty translates into a distinct physical environment within which parenting and child development occur. Most of the findings presented in this section are based on North American literature, as these types of studies have not yet been replicated in developing countries.

Physical and Social Setting of Poverty: Exosystem, Mesosystem, and Microsystem

Findings of US research suggest that residents of impoverished neighbourhoods are disadvantaged in many ways. Neighbourhoods with a high concentration of poverty often have a greater level of unemployment, inadequate health and prenatal care, inefficient childcare, fewer literacy resources, school norms favouring more risky behaviours, and an absence of recreational activities. Families residing in high-risk environments such as these also have to contend with greater exposure to pernicious environmental stresses such as violence, being without shelter, the presence of illegal drugs, and negative role models. On the whole, these less affluent North American communities are characterized by a lack of community identity and insufficient formal

and informal social support systems (e.g., Duncan, 1991; Leventhal & Brooks-Gunn, 2003; Evans, 2004).

Poverty also limits the number and quality of settings in which a North American family can reside (Leventhal & Brooks-Gunn, 2003). Poor children are more likely to live in crowded homes located on commercial-industrial streets. These houses are more likely to have structural defects (e.g., cracks in floor, unprotected stairwells, lead paint, and leaky ceilings), inadequate heat, water, and air quality, and be infested with rodents, compared to the homes of their higher-SES counterparts (e.g., Bradley & Corwyn, 2002; Evans, 2004). Specifically, more affluent parents live in more aesthetic neighbourhoods and have the financial resources to integrate their children into the leisurely activities offered by their community. Indeed, findings from US research suggest that these more prosperous parents have more financial resources for toys and learning materials (Hoff-Ginsberg & Tardif, 1995) and provide a better home learning environment for their children (Bradley, Whiteside-Mansell, Mundfrom, Casey, Kelleher & Pope, 1994) as well as more stimulating experiences (Bradley & Corwyn, 2002). Based on US findings, it appears that for many of the world's poorest families, poverty translates into a lack of enjoyable and developmental opportunities. Overall, poverty is thought to create a physical setting for parenting that is characterized by challenges and a lack of resources and opportunities, regardless of one's country of residence. Nonetheless, the specific adaptation needs and cultural values unique to each cultural setting also influence parenting in conditions of economic hardship.

Cultural Influences on the Physical and Social Setting of Poverty

As challenging as living in poverty may be, cultural values such as materialism and individualism may exacerbate the experience of economic deprivation. For instance, in industrialized countries, poverty may become an experience of deprivation in a world in which monetary affluence serves as the standard. The extent to which daily life is “monetarized” will likely influence parents’ participation in the workforce and serve as the basis on which their decisions are taken. In such a “monetarized economy,” those who do not have enough are often left behind (Garbarino & Kostelny, 1992). When the emphasis is placed on the accumulation of material resources, self-sufficiency, and personal accomplishments, as it is in most Western countries, being left behind may have serious consequences for individuals’ wellbeing. Poverty may be construed as personal failure. Also, the need to ask for assistance might present itself as an infraction of the self-sufficiency norm and lead to negative self-image and stress. On the other hand, in collectivistic Latin cultures, material resources are shared among family and community members, especially in poor, rural communities. *Familismo*, the family as a safety net, is valued. As such, being dependent on others is commonly expected and brings no shame (Falicov, 1998). The experience of poverty in an individualistic versus more collectivistic culture may represent a very distinct experience. Moreover, poverty may not exert its influence in the same ways in cultures where it is the typical economic situation relative to other industrialized countries that are further from a mere subsistence level.

Therefore, the compounding forces of SES and culture are thought to create a physical context within which poverty has specific consequences and a specific meaning. As such, it is

also believed to create a specific environment within which certain behaviours and skills are more conducive to survival and wellbeing. It is within this multifaceted physical and social environment that parenting occurs.

Parenting in Context: Values, Goals, and Behaviours

Parenting values, goals, and behaviours are embedded in the physical, economic, cultural, and political reality to which parents must adapt (Harkness & Super, 1995). LeVine (1974) explains that variations in childrearing patterns emerge from the different requirements imposed by different environments, thus ensuring the survival of children and family members despite variations in the social and economic context. Ogbu (1981) refers to these basic abilities as instrumental competencies. As I will suggest, parental beliefs and goals are influenced by multiple factors in the environment, such as: (1) their view of how the world works and the skills required to live in that world; (2) the predominant perception of children; and (3) their access to information.

Parental World View

Parents' view of the way the world functions is thought to be determined by multiple factors such as adaptation to their physical and social setting, workplace experiences, and neighbourhood characteristics. The following paragraphs will provide a brief presentation of these influences.

Adaptation Needs and Survival Skills

The resources available and the demands of the physical environment are thought to influence parents' daily efforts for adaptation. Societies without elaborate infrastructures place

different adaptational demands on parents than those placed on parents residing in post-industrial societies. Indeed, because many tasks that are accomplished by technology in more sophisticated societies (e.g., access to water in the home, washing machines, processed foods) are carried out by the family, especially the maternal figure; more co-operation is required among family members and the community in order to ensure survival. To this effect, LeVine (1974) believes there is a hierarchy to parenting goals; meeting children's primary needs is the first goal, followed by the teaching of skills that will ensure future self-maintenance and the transmittal of culture-specific values. Accordingly, the societal infrastructure will determine where on the hierarchy of goals parenting begins and the manner in which parents invest in their offspring. In societies without an elaborate infrastructure, parents are more likely to invest their energies into meeting their child's primary needs (e.g., food, clothing, and protection from harm). In light of the very demanding maternal workload associated with meeting the family's basic needs in these poor agricultural villages, parents enlist children's assistance. As a result, these children have more chores (e.g., take care of their younger siblings, attend to the cattle, collect firewood, fetch water from the river, and help with gardening and food preparation) to do than those residing in more complex societies (Harkness & Super, 1995). Similarly, based on research on rural and urban children of Mexico, Israel, Colombia, Korea, Kenya, Australia, Europe, New Zealand, Zambia, Greece, and the United States, Eisenberg and Mussen (1989) concluded that children reared in traditional rural subcultures and small, semi agricultural communal settlements cooperate more readily than do children reared in modern urban subcultures that tend to be more competitive and rivalrous.

According to Harkness and Super (1995), once parents residing in simpler societies have met their children's basic needs, in spite of the paucity of resources, they then concern themselves with their children's capacity for future economic self-maintenance. In agricultural villages, where co-operation is required to achieve the necessary food accumulation that will ensure present and future economic sustenance, parents value more nurturant and responsible behaviours and promote obedience. The closer parents are to a subsistence level, the more obedience is valued. In contrast, achievement, self-reliance, and independence are encouraged in hunting and gathering societies. Despite the manner in which food intake is assured by each society, all of these instrumental competencies are acquired by children in their home settings by observing and helping their parents and other caregivers. Harkness and Super (1992) found that Kokwet children aged three to six years spent nearly a quarter of their time doing chores. This greater time spent on household chores reflects parents' developmental goals of responsibility and obedience.

On the other hand, in societies with a more elaborate infrastructure, in which the basic survival necessities are assured and children's primary needs are easily met, parents are freed to focus on the transmittal of skills and cultural values. In such urbanized industrial societies, children are reared to be competitive and achievement-oriented in order to succeed in the hierarchical individualistic system. Child socialization is also aimed at training for independence and risk-taking (Harkness & Super, 1995). Hoffman (1977) noted that although parents aspired for their sons to be ambitious, intelligent, independent, and hardworking, that is, to develop skills required for successful professional employment, they aspired to skills more in keeping with the traditional division of labour for their daughters. Being kind and loving, attractive, having a good

marriage, and being a good parent were what parents aspired to for their daughter's future. Moreover, in these literate societies, education is often done in institutions such as schools and external educational programs (Harkness & Super, 1995) and through play (Harkness & Super, 1992). Nonetheless, in these more complex societies, parents endorse the belief that their children's proper development requires a significant time investment on their part. Indeed, in their examination of the developmental niche, Harkness and Super (1992) found that Cambridge children between the ages of one and five years spent over half their waking time engaged in activities involving play, television, books, and bedtime rituals with their parents, but less than one percent of their time doing household chores. The organisation of children's daily routine is in keeping with Cambridge mothers' greater emphasis on the development of cognitive abilities and independence. These mothers view children's play as a means for them to develop their imagination, creativity, and cognitive skills. The time children spend playing alone is also thought to develop their independence.

It appears that the societal infrastructure and the subsequent ease with which the family's basic needs can be met influence where on the hierarchy caregivers begin their parenting. In industrialized countries, there is a greater focus on child development within the parenting role whereas in less developed countries, parents are starting their parenting at the bottom of the hierarchy of parenting goals, namely meeting their children's basic needs. As I will elaborate in the following paragraphs, workplace experiences are also an important part of parents' daily lives and as such tend to influence their worldview.

Workplace Experiences and Social Status

Work is the medium through which parents assure their subsistence and the survival of their family unit and is believed to influence their understanding of the world (e.g., Crouter & McHale, 1993). In this setting they gain an understanding of the rules associated with the functioning of their social environment. This work experience and their understanding of it are thought to influence their values and perception of the skills their children will need for future economic subsistence in this context (Ogbu, 1981; Crouter & McHale, 1993). Therefore, fathers with blue-collar employment promote more obedience, whereas fathers in professional and managerial positions promote more self-direction and initiative in their children (Kohn, 1969). While studying the link between fathers' employment and parenting values, Kohn (1969) also observed that these fathers' beliefs translate into different childrearing styles. For instance, he noted that working class fathers more frequently resorted to the use of physical punishment than did middle-class fathers, who reportedly used more reasoning and withdrawal of love as disciplinary measures. Moreover, fathers whose work setting used a "participative management style" acquired qualities that facilitated their parenting role. These fathers were reportedly better able to transfer these democratic skills within their parent-child relationship (Crouter, 1984). Lastly, occupation, income, education, and SES have been found to influence parental characteristics such as IQ, views on child development, and parenting and psychological adjustment, which in turn influence their parenting style (Hoff-Ginsberg & Tardif, 1995).

Neighbourhood Characteristics and Resources

Employment also indirectly influences the parenting process by means of the financial resources available for housing expenses (Leventhal & Brooks-Gunn, 2003). As mentioned earlier, lower income families often reside in unsafe neighbourhoods which, according to US research, leads to a negative community climate and more parental stress and poorer health. In addition to constraining families to neighbourhoods that are dangerous and depleted of necessary resources for optimal child development, the daily financial struggles also introduce tension in family relations and thus influence the quality of the child's home environment. More specifically, Leventhal and Brooks-Gunn (2003) propose that low-SES neighbourhoods exert a negative effect on parental wellbeing, which affects child outcomes through parental behaviour and the quality of the home environment. For instance, if the neighbourhood is perceived as dangerous by the caregiver, more restrictive childrearing techniques will be implemented and less maternal warmth will be displayed to children. This parenting style may emanate from the need to protect children from a dangerous and hostile environment (Hoffman, 2003; Leventhal & Brooks-Gunn, 2003). As such, this impoverished context is conducive to stricter discipline and to an increased risk of maltreatment (e.g., Leventhal & Brooks-Gunn, 2003).

This review of the influence of context-specific adaptation needs, parents' work setting, and neighbourhood of residence on the family system lends support to Bronfenbrenner's (1979) ecological perspective, according to which the characteristics of the exosystem and parent's interaction in the mesosystem influence the family context (microsystem). In turn, the exosystem and mesosystem are also embedded in the cultural, societal, and economic issues of the

macrosystem. In the following review on the perceived value of children, I will allude to the macrosystem's influence on other systems.

Perceived Value of Children

Hoffman (1987) proposed that the physical and social setting influences the value children have for their parents. In turn, children's value is thought to influence the parenting process. In countries that afford no government provisions for its elderly members, children are required for survival. If a son is more likely to ensure their wellbeing in old age, parents will give preferential treatment to their male children. These parents will also encourage obedience in order to ensure that the child complies with filial obligations. In countries further from the subsistence level, parents value their children for emotional reasons and promote the development of personal qualities in their offspring (Harkness & Super, 1995; Hoffman, 1987; Ogbu, 1981).

On the other hand, findings from US research suggest that impoverished parents within an industrialized country may perceive their children negatively due to the costs they incur. The quality of the parent-child relationship may also be damaged when parents realize that they cannot meet their children's material expectations stemming from the "monetarized economy". Consequently, children may be perceived as an economic burden due to the costs of raising them and the time taken away from their parents' income generating activities (Garbarino & Kostelny, 1992).

Access to Information

Although the context within which parenting occurs is thought to influence the parenting role, parents also acquire culturally loaded notions of childrearing during their socialization for

parenthood (LeVine, 1980). Harkness, Super, and Keefer (1992) stipulate that culturally valued parenting and child behaviours are dictated by folk theories of childrearing. Accordingly, based on this shared knowledge and their own experiences, parents form beliefs that later guide their parenting. Likewise, characteristics of the physical and social environment in which parenting occurs will inform parents about what their children will need to be successful and provide guidance concerning the most useful parenting strategies. Along these lines, Cohen (1981, in Okagaki & Johnson-Divecha, 1993) found that parents acquired novel parenting ideas from their social networks. In his ethnographic study, Cohen examined how working class mothers adapted to their transition into the Great Britain middle-class following their husband's career advancement. These mothers learned what was expected of them in their new roles by means of the neighbourhood's standard of what constitutes a good wife and mother. Lastly, mothers who have less access to their own maternal figure are turning to the parenting and child development literature for advice, this tendency being more prevalent among higher-SES mothers (Okagaki & Johnson-Divecha, 1993).

Luster, Rhoades, and Haas (1989) proposed that parents' SES, values, childrearing beliefs, and parenting behaviours are linked, with values and beliefs mediating the effects of SES on parenting practices. On the other hand, Hoff-Ginsberg (1991, in Hoff-Ginsberg & Tardif, 1995) comments that although most parental behaviours can be explained by childrearing beliefs and values, certain parental behaviours are merely the result of the parents' general disposition.

Parent Characteristics

Due to the higher incidence of negative life events experienced by lower-SES parents and the lack of resources to facilitate their coping, they experience more psychological distress (Magnuson & Duncan, 2002; McLoyd, 1990). Indeed, a higher rate of mental health disorders is reported by economically strained adults living in industrialized countries (Liem & Liem, 1978; Neff & Husaini, 1980; Dressler, 1985). The authors attribute the higher prevalence of mental health problems to the number of uncontrollable stressors in their daily lives. In particular, constant concerns regarding the need to decrease expenditures and increase family income and insufficient financial resources to pay for basic health care are associated with depression, anxiety, hostility, a feeling of oppression, and more personal dissatisfaction. Based on mostly North American research, these adults are also more inclined to consume alcohol, have somatic complaints, and experience eating and sleeping disorders. Moreover, they are at greater risk of developing a neurosis, a psychosis, or committing suicide (e.g., McLoyd, 1990; Dressler, 1985). Elder, Conger, and Foster (1989 in McLoyd, 1990) contend that the greater the effort an individual must exert to adapt to his/her situation and ensure his/her survival, the greater the level of psychological distress.

Furthermore, North American studies using interview and observation techniques reveal that poverty, in addition to acting on parents' psychological wellbeing, also translates into a different parent-child relationship. Specifically, an egalitarian and accepting parent-child interaction is more characteristic of higher-SES parent-child dyads, whereas obedience and maintaining order are more characteristic of lower-SES parent-child relationships (Hoff-Ginsberg

& Tardif, 1995; McLoyd, 1998; Bradley & Corwyn, 2002). These less affluent mothers tend to use more dominant disciplinary strategies and to provide less emotional support to their children. They also use more physical punishment and less reasoning strategies to obtain child obedience. In fact, based on US research, financially strained mothers are more inclined to give orders without explanation, to take less into account their children's needs and wishes, and to give less verbal reinforcement of desired behaviours in their children. Poverty has also been associated with a reduction in the expression of affection in the mother-child relationship (e.g., Conger, McCarty, Yang, Lahey, & Kropp, 1984). As the financial situation worsens, parents are noted to display less consistency in their discipline and less affectionate behaviours toward their children (Lempers, Clark-Lempers, & Simons, 1989; McLoyd & Wilson, 1991). In addition, the prevalence of child abuse is greater in lower-SES families than higher-SES households (e.g., Gelles, 1989; Brooks-Gunn & Duncan, 1997). This greater incidence of child maltreatment is best explained as a result of the constant strains of daily stressors that precipitate depression which, in turn, are linked to a higher prevalence of the use of physical punishment (Eamon & Zuehl, 2001). Child maltreatment is also explained by certain characteristics of family structure such as the number of children in the family and parents' age (Hashima, & Amato, 1994).

In overview, SES and culture are multifaceted variables that are believed to act as organizing forces in the daily lives of parents and children. The interaction between culturally prescribed behaviours and resources available in the physical and social setting likely creates specific adaptation needs. From the need to adapt to cultural and environmental demands emerges a specific caregiver psychology and parenting style. What is deemed adaptive in daily living as

well as what one believes is expected by the external culture and social/political forces are thought to influence parenting practices and parenting goals. Parents aim to ensure their children's survival and teach them the skills they will need to be well-adapted adults in the social, political, and economic spheres of adult life. Therefore, within different parenting contexts, I can expect different child developmental outcomes.

Child Development and Adjustment in the SES and Cultural Context

I will review the effects of poverty on two major domains of development: (1) cognitive/academic achievement and (2) socioemotional development. Mostly North American studies will be reviewed because this type of research has not, to my knowledge, been replicated in most developing countries.

Cognitive and Academic Achievement

There is a large body of research linking SES to child cognitive development. For instance, Bradley, Corwyn, and Whiteside-Mansell (1996) have found a link between SES and children's intellectual and academic performance from infancy through middle-childhood across several cultures. Meta-analysis results by White (1982) suggest that among the traditional indicators of SES, family income is the highest correlate of school success, followed by parental occupation and education level. However, the combination of several SES measures accounted for more variance than single indicators. In line with White's (1982) findings, some authors (Ross, 1998; Ross & Robert, 1999) observed a linear relationship between parents' income and children's mathematics and vocabulary test scores, with children belonging to higher income families having better scores. Other research findings increasingly suggest that the effects of family income on

children's intellectual quotient are not linear but rather plateau at a certain SES level. For instance, the positive influence of income on IQ and Peabody Picture Vocabulary Test (PPVT) scores was greater for children living close to or under the poverty line than for middle or high SES children (McLoyd, 1998; Duncan & Magnuson, 2003). In spite of inconsistent results regarding the nature of the relationship between income and child cognitive development, studies have nonetheless documented significant negative effects of poverty on children's cognitive development and language proficiency (e.g., Korenman, Miller, & Sjaastad, 1995; Smith, Brooks-Gunn, & Klebanov, 1997; Bradley & Corwyn, 2002).

In a more recent study using their data from the Fullerton Longitudinal Study (FLS), Gottfried, Gottfried, Bathurst, Wright Guerin, and Parramore (2003) reported a correlation between all SES indicators (with the exception of mothers' occupation) and children's intellectual performance throughout their developmental span. They also noted that gifted children belonged to families with a significantly higher SES relative to the SES of nongifted children. Contrary to White's (1982) findings, the SES variable linked to children's intellectual score was primarily parents' educational accomplishments. In fact, the authors concluded that parent's education was not only advantageous to their occupational status but also positively influenced the developmental experiences offered to their offspring and subsequently many domains of their development throughout childhood. In keeping with the findings of Gottfried and colleagues (2003), Phillips, Brooks-Gunn, Duncan, Klebanov, and Crane (1998, in Duncan & Magnuson, 2003) noted that the PPVT scores of five and six-year-old children, from their national

representative sample of younger mothers, were best accounted for by parental schooling (29% of the variation in test scores).

Furthermore, according to North American research, the type of poverty, be it persistent or transitory, contributes to the effects of poverty on children's cognitive development. Persistent poverty is consistently associated with a greater negative influence on pre-school children's cognitive development. That is, children who experience both types of poverty are less affected than those in persistent poverty but more so than those having never experienced any type of economic deprivation. Likewise, US research findings suggest that the duration of poverty exerted a similar influence on academic performance, with more persistent poverty being associated with a decline in academic competence (e.g., Smith et al., 1997; Duncan & Magnuson, 2003). Poor children are two times more likely than affluent children to repeat a grade or to drop out of school and 1.4 times more likely to have a learning disability (Duncan & Magnuson, 2003). Also, deficiencies in language skills, mathematical abilities, and reading skills among those in conditions of persistent poverty were double and threefold relative to the deficiencies associated with the transitory state of poverty (Korenman et al., 1995).

Socioemotional Adjustment

The chronic adversity associated with impoverishment influences children's emotional lives. For instance, undesirable life events faced by poor North American children were predictive of socioemotional maladjustment, including depression, psychosomatic complaints, and aggression (McLoyd, 1998). Further empirical findings indicate a greater prevalence of symptoms indicative of psychiatric disturbance and maladaptive social functioning among poor children than

among their more affluent counterparts (Bradley & Corwyn, 2002). Studies using samples of children from primary care and paediatric care settings as well as non-clinical samples have found a greater rate of both emotional and behavioural problems among lower-SES children (e.g., McLoyd, 1998; Gottfried et al., 2003). For instance, some researchers (Ross, 1998; Ross & Robert, 1999) noted a linear relationship between parental income and hyperactivity in children aged 4 to 11 years. More specifically, seventy four percent of children whose parents' salary fell within the 10,000 dollar range had an elevated score on the hyperactivity scale compared to 46% of children among families with a yearly income of 80,000 dollars or more. Indeed, poor children are 1.3 times more likely to have a parent-reported emotional or behavioural problem relative to more affluent children (Duncan & Magnuson, 2003). Social class effects, favouring higher-SES children, were noted in parent and teacher reports on child adjustment. The effects were greater for externalization problems relative to internalization difficulties and greater among male participants than females (Horwitz, Bility, Plichta, Leaf, & Haynes, 1998; Achenbach, Verhulst, Edelbrock, Baron, & Akkerhuis, 1987; Bolger, Patterson, Thompson, & Kupersmidt, 1995). While Gottfried and colleagues (2003) observed a tendency for higher-SES parents to report less emotional and behavioural problems in their children, they did not notice this trend in teachers' reports.

The repercussions of economic hardship also extend to children's social development and are reflected in the quality of their peer relations. According to Ramsey (1988), the more underprivileged children received more negative peer nominations on a social acceptance dimension and were evaluated as being less socially competent by their teacher. Family income

was also associated with children's choice of peers. Lower-SES children were more likely to have peers who were frequently involved in problematic situations (20%), relative to higher-SES children (8%) (Ross, 1998; Ross & Robert, 1999). Moreover, Weinger (1998) reported that children living in poverty were aware of their low SES, an awareness that gradually infringed on their positive self-view. In line with Weinger's (1998) findings, Gottfried and colleagues (2003) reported a significant link between SES indicators (mothers' occupation excluded) and children's self-concept. According to the authors, the correlation of SES variables tended to be higher with children's school self-concept than with their general self-concept.

Overall, poverty was associated with inferior academic achievement, delayed cognitive development, increased prevalence of internalization and externalization problems, lower self-concept, and problem-solving and interpersonal-skill deficiencies. These findings are in keeping with Gottfried and colleagues' (2003, pp. 204) conclusion that SES "(...) relates to virtually every aspect of human psychological development and across a considerable period of time. (...) One can hardly think of any other variable that is so central in the course of human psychological development". Indeed, the negative effects of persistent poverty on child development point to a possible cumulative deficit effect. This possibility was alluded to in Luster and Okagaki's (1993) contention that being born and raised in an impoverished environment was an impediment to future life opportunities. They proposed that the additional obstacles that poor children have to overcome reduce their chances of upward mobility. Accordingly, they are more likely to raise their children in this same poor environment. This stagnation was explained by the lack of resources in the environment, such as a lack of appropriate schools, which leads to inadequate

education and limited employment opportunities, further adding to the challenge of changing one's plight. As illustrated by Luster and Okagaki (1993), poverty is filtered through the systems surrounding the developing children and it is by means of its impact on children's environment that it impedes their optimal development and life opportunities. In the next section I will present the pathways of influence of SES on children's development as proposed in the present North American literature.

Paths of Influence: Mediating Variables

Some studies have explored the process through which SES operates to influence children's development. I will describe some of the pathways between poverty and cognitive and socioemotional development as discussed in the current literature. Again, this section is comprised mainly of North American research because these types of studies, as far as I know, have not yet been replicated in developing countries.

Cognitive Development/ Academic Competence

According to recent studies, the repercussions of socio-economic disadvantage on children's cognitive development, during their first years of life, were filtered through the quality of stimulation, namely, the different learning experiences and the academic and language skills offered in the children's home environment (e.g., Bradley & Corwyn, 2002; Hoff, 2003). To this effect, in a comprehensive study using the National Longitudinal Survey of Youth (NLSY) data, Bradley and Corwyn (2003) found that learning stimulation mediated the relation between both maternal education and family income (SES variables) and reading and math attainment scores (achievement variables). Moreover, the learning stimulation provided at an earlier development

period mediated children's language proficiency and reading and math attainment scores at a later stage. According to the authors, these findings are indicative of both contemporaneous and cumulative effects. Furthermore, in Gottfried and colleagues (2003) study using the FLS sample, the authors noted a significant correlation between family SES (with the exclusion of mothers' occupation) and the type of intellectual and cultural stimulation offered, as measured by the Family Environment Scale. The more affluent families were noted to benefit from a more intellectually stimulating and cultured family environment. In addition, the family SES status was strongly and significantly correlated with children's IQ and academic performance. These findings are consistent with those of other US studies revealing that higher-SES families provide more learning material and cultural resources to their children, which in turn promotes better academic and cognitive development in children. In particular, they purchased more reading material, included their children in educational and cultural activities, and monitored the television programs their children viewed. Access to such stimulating opportunities mediated the relationship between family income and children's cognitive development and school success, from infancy through adolescence (Bradley & Corwyn, 2002).

In their pathway analysis study using the NLSY sample, Bradley and Corwyn (2003) noted that maternal responsiveness mediated the relation between both maternal education and family income and vocabulary attainment. Similarly, in other studies, the greater lexical richness noted among higher-SES children was attributed to differences in language usage by lower versus higher-SES parents. A comparison of the SES groups revealed that higher-SES children were exposed to an open and flexible communication style, in contrast to the less communicative

pattern of their lower-SES counterparts. Furthermore, higher-SES mothers engaged in more interactions with their children and provided more object labels, assisted in maintaining conversations initiated by the child, were more responsive to their children's verbalizations, and asked more questions (Hoff-Ginsberg & Tardif, 1995; Hoff, 2003). A review of the selected pathways of influence suggests that both maternal responsiveness and learning stimulation mediate between SES and children's language acquisition. Bradley and Corwyn (2003) also noted that learning stimulation partially mediated the link between SES and children's vocabulary attainment across ethnic groups (European, African, and Latin American).

The importance of both learning and language stimulation on children's optimal development is further underscored by studies in which income explained less of the variance in children's cognitive abilities when the quality of the home environment was entered into the equation suggesting that higher-SES children's better development is best explained by the superior home environment provided to them by their parents. For instance, using data from the NLSY and the Infant Health and Development Program (IHDP), Smith and her colleagues (1997) found that the Home Observation for Measurement of the Environment (HOME) scores at age three for their now five and six year-old sample reduced the effect of family income on the PPVT by 42%. Using the NLSY data, they noted that both the early and concurrent HOME scores reduced the effect of income by between 18% and 42% for different indicators of children's cognitive abilities. Based on the IHDP data, these same authors observed that the HOME score at age three reduced the effect of income by 30% to 40% on three to five year olds' PPVT, Weschler Pre-school, and Primary scale of Intelligence scores (Smith et al., 1997). Duncan and Magnuson

(2003) attribute the more stimulating parent-child relationship among higher-SES dyads to parental education. In their view, more educated parents have a more verbal and supportive teaching style. In addition, the skills parents acquire through higher education may enhance their ability to establish a daily routine and achieve their parenting objectives.

Indeed, as noted by DeGarmo, Forgatch, and Martinez (1999, in Bradley & Corwyn, 2002), parental income, education, and occupation affect the amount of stimulating opportunities they afford their children. Along these lines, Hannan and Luster (1991) examined the likelihood of providing a stimulating and emotionally responsive home environment to one year old children based on the presence or absence of several risk factors (e.g., maternal intelligence, teenage motherhood, absence of spouse or partner in the home, presence of three or more offspring, low income, and difficult child), many of which are more prevalent among lower-SES families. A relation was found between the number of risk factors and the quality of the home environment. Eighty-eight percent of the families that met criteria for all six risk factors were in the low-home-environment-score group in comparison to 11% of the families who did not meet criteria for any of the risk factors. Other North American researchers have also noted the effects of crowding and the presence of several siblings in the household. Crowding has been found to contribute to more distractions and less stimulating interactions between parent and child, whereas the presence of more siblings is associated with a decrease in individual time allotted to each child (Bradley & Corwyn, 2002). As noted by Hannan and Luster (1991), few mothers can provide high quality care when many other daily obstacles use up their resources. Thus, it appears that SES affects children's cognitive development, school achievement, and language proficiency by creating an

at-risk family environment that is too overwhelmed to provide children with the age-appropriate stimulation and emotional responsiveness they require for optimal development.

Socioemotional Adjustment

Lack of age-appropriate stimulation in the home setting also served as a mediator between SES and child behavioural problems. More specifically, when parents involve children in educational and cultural events, their children are afforded positive socialization opportunities. Also, while children are occupied with these activities, they are not bored and frustrated, emotions that often arouse negative affect in parent-child interactions (Bradley & Corwyn, 2002). In a more recent study, Bradley and Corwyn (2003) again noted that learning stimulation mediated between both maternal education and family income (SES variables) and children's behaviour problems. Maternal responsiveness was not a significant mediator.

Inversely, in testing their proposed explanatory model, McLoyd and Wilson (1991) found that the relationship between financial hardship and child development was mediated by parental distress. Findings indicate that economic difficulties led parents to seek to increase their sources of income and decrease expenditures. As they struggled to make ends meet, parents' distress increased, leading them to communicate their precarious financial situation to their children and display less affectionate behaviours toward them. This parental distress was linked to poorer child development outcomes. McLoyd (1990) reported similar findings. The author concluded that economic hardship decreased the quality of parental involvement (e.g., encouragement, warmth) and the consistency of disciplinary strategies. This inconsistent parenting, devoid of emotional warmth and encouragement, mediated the influence of poverty on children's socioemotional

development. In keeping with these findings, Terrisse, Roberts, Palacio-Quintin, and MacDonald (1998) contended that parental attitude and parenting strategies were better predictors of child development than parental educational attainment and socio-economic status. Also, Dodge, Pettit, and Bates (1994) identified severe discipline, absence of emotional warmth and support in the mother-child relationship, peer group instability, and a lack of cognitive stimulation as variables in children's socialization process that linked SES to childhood behavioural problems.

Bradley and Corwyn (2002) reported that the condition of poverty was associated with a feeling of powerlessness, low self-esteem, and a sense of helplessness in parents. According to the authors, it also led to a depletion of parental resources and the emergence of negative emotional states such as anxiety, depression, and hostility. In turn, these emotional states led to more difficult interactions between family members. Parents' emotional state and level of energy also determined the use of parenting strategies, with negative strategies compromising the quality of parent-child interactions. These authors' contention is supported by the results of Eamon and Zuehl's (2001) hypothesized structural model which suggested that lower-SES mothers experience more depressive symptoms than their more affluent counterparts. The presence of maternal depression was directly linked to children's poorer socioemotional development. Maternal depressive symptoms were also linked to more frequent use of physical punishment, which in turn was also directly associated with children's socioemotional problems. These findings are also consistent with Duncan, Brooks-Gunn and Klebanov's (1994) assertion that the presence of maternal depression and the mother's ability to cope with economic stress mediated between poverty and behaviour problems in children. Results from a study conducted by the

National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (2004) further suggest that growing up in poverty with mothers who are depressed and poorly educated is predictive of compromised development in children. Alternatively, Brody and Flor (1998) found that among rural African-American single-parent families of six to nine year-old children, reduced financial resources were associated with lower maternal self-esteem and an increase in depressive symptoms. However, lower self-esteem, but not depressive symptoms, was associated with deterioration in family routines and the quality of mother-child interactions. In turn, these family processes were related to children's self-regulation and indirectly associated with their academic achievement as well as their externalizing and internalizing problems.

In summary, recent North American studies suggest that poverty and economic stress increase the rate of cognitive, academic, and socioemotional adjustment problems through various mediums. First of all, children's cognitive and language development and academic competence were affected by poverty through the quality of the learning and language stimulation provided in the home environment. Maternal responsiveness also mediated between SES and children's language proficiency. Lastly, emotional and behavioural problems in children were in part explained by an unstimulating home environment, lack of maternal responsiveness to children's independence and affection needs, maternal psychological adjustment, and a greater tendency among poor parents to use harsh and inconsistent disciplinary techniques (e.g., Dodge et al., 1994; Bradley & Corwyn, 2003). Inversely, a good parent-child relationship was found to be conducive to better cognitive, academic, and emotional development (NICHD, 2004).

OBJECTIVES

Research on the effects of SES has largely been conducted in Western societies such as the US. Many of the negative effects and paths of influence of economic deprivation have not been explored with other cultural groups (Bradley & Corwyn, 2002). It is therefore not possible to determine whether the processes observed in mostly North American research operate in other countries (Magnuson & Duncan, 2002). More cross-cultural research is required to clarify which dimensions are universal and which are culture and context specific (Crouter & McHale, 1993).

For instance, even though financial hardship in the US is widespread, it is suffered by a minority and at a moderate level of severity. Poverty may not exert its influence in the same ways in cultures where it is the typical economic situation and in which families are at a mere subsistence level. In the present study, I focus on issues of SES in the Dominican Republic, one of the many developing countries in which most people live in poverty, but where there is also a substantial middle-class minority.

Secondly, in Western countries, more emphasis is placed on the accumulation of material resources, self-sufficiency, and personal accomplishments, whereas in collectivistic cultures such as the Dominican Republic, material resources are shared among family and community members, especially in poor, rural communities. This may lead to a very different experience of poverty and different effects on parenting and child development than those observed in the mostly North American empirical literature. Indeed, because individualistic cultures tend to stress competition, personal success, and the accumulation of material goods, it is possible that more impoverished parents and children are alienated within this culture, whereas the value of sharing, collaboration,

and provision of mutual aid that are promoted in collectivistic cultures may shield the parent-child dyad from some of the harmful effects of economic deprivation. Therefore, my second objective is to clarify the influence of an impoverished Dominican physical and social setting on maternal psychological adjustment, maternal parenting values, parenting practices, and child development. More specifically, I want to determine whether poverty exerts the same influence on parents and children living in small agricultural villages in the Dominican Republic as has been observed in the mostly North American literature.

Thirdly, the characteristics of the poor rural agricultural village and the adaptation needs that emerge from such an environment can exert an influence on the types of behaviours that are encouraged by parents and the manner in which children are socialized. In this study I propose to increase understanding of the influence of parental values, as proposed by Kohn (1969), on parenting practices as cited earlier on page 11.

Furthermore, poverty in certain developing countries may not exert the same effects on child development and filter through the same pathways of influence as it would in the US. In the present study, I aim to clarify the contribution of maternal psychological adjustment, parenting stress, social support, parenting practices, and the parent-child relationship on different developmental dimensions of children belonging to distinct SES communities within one collectivistic culture. In essence, I want to clarify the unique contribution of the three components of the developmental niche to child cognitive development and socioemotional adjustment within a collectivistic culture (refer to figure 1).

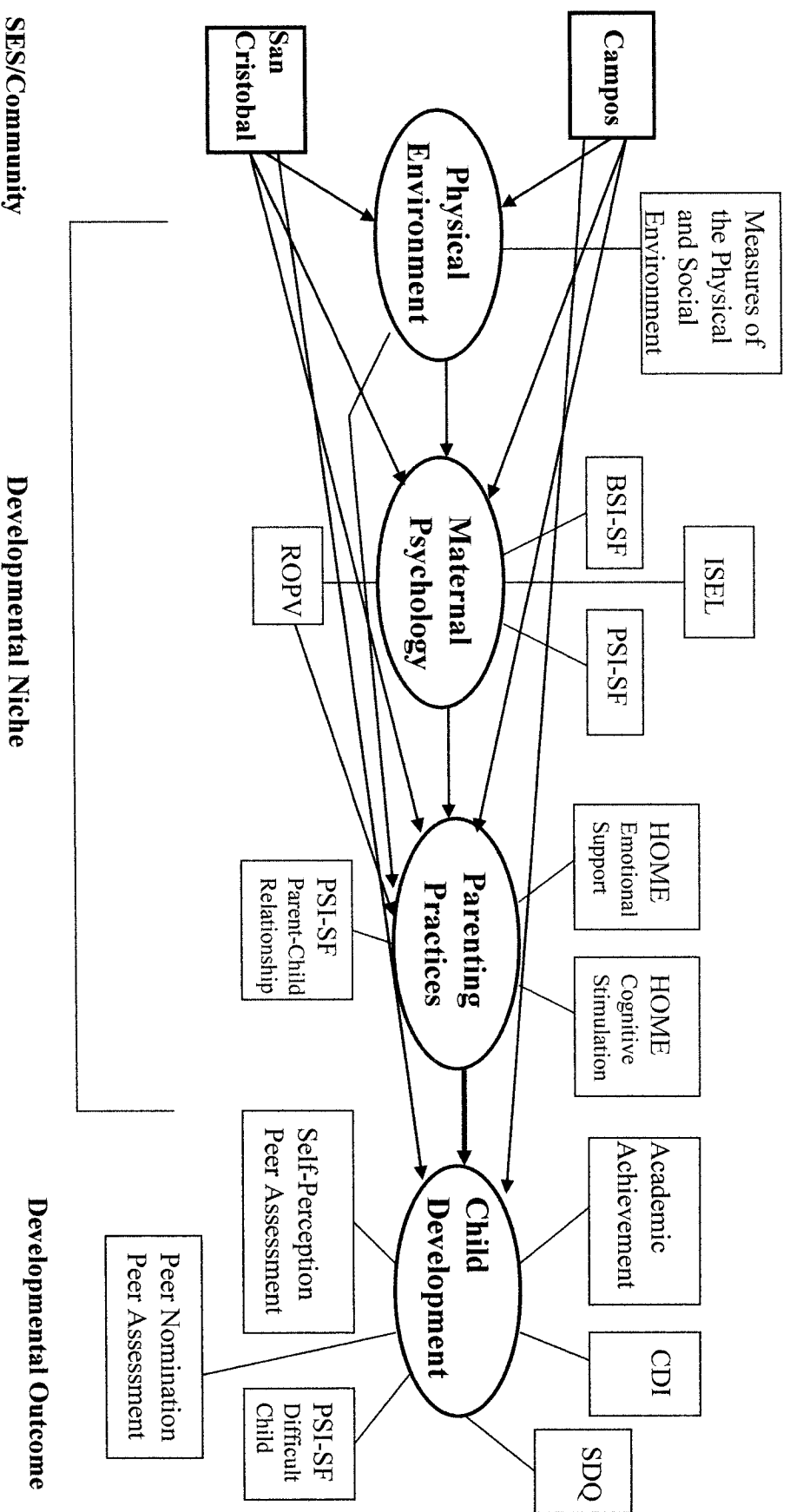


Figure 1 Hypothetical Paths of Influence between Poverty and Child Development among Dominican Children

It is also noteworthy that studies exploring the link between poverty and children's emotional development have not, to date, been comprehensive (Conger, Conger, & Elder, 1997). This focus on one developmental dimension at a time has complicated the study of pathways of influence because the home and parenting variables that affect child development may differ for each developmental dimension. Moreover, the variables in the impoverished physical and social environment that affect one aspect of parenting and the quality of the home setting may differ from those that affect other dimensions of these variables. In an attempt to fill some of these gaps, in the present study I propose to consider several child development dimensions simultaneously. In addition to having children's behaviour assessed by their caregiver and teacher, I will also consider their academic achievement, interpersonal style, popularity among peers, and self-perception, as well as their language, social, self-help, numbers, letters, fine motor, and gross motor skills. I hope that in considering multiple developmental dimensions conjointly, I will manage to obtain a more complete understanding of children's development and determine whether poverty exerts a more global influence on child development or has a more harmful effect on some specific dimensions.

Lastly, although there is a growing body of research on the negative effects of poverty, to date little is known of the positive contribution of the physical and social setting and parenting variables. More research is needed on the context and parenting characteristics that are associated with positive child outcomes in order to inform future interventions. Hence, in this study, I aim to clarify which dimensions of parenting are linked with better child development in spite of their impoverished living conditions.

HYPOTHESES

Hypothesis 1

Based on the current literature pertaining to the environment of childhood poverty (Evans, 2004; Bradley & Corwyn, 2003), I hypothesize that SES/community (either Campos, poor agricultural villages, or San Cristobal, middle-class urban center) will influence all levels of parents' and children's physical and social environment. Particularly, parent demographic data, house-material quality, neighbourhood resources, and educational opportunities in the neighbourhood will differ significantly by SES/community, with lower-SES children residing in an overall more impoverished developmental context.

Hypothesis 2

In light of previous research, I propose that SES/community will be associated with the two remaining components of the developmental niche namely maternal psychology and parenting practices. More specifically, I expect that lower-SES mothers will report more psychological symptoms, less social support, and more stress in their parenting role compared to more affluent mothers. I also predict that lower-SES mothers will prefer conformity by the children in their parenting style, whereas higher-SES mothers will prefer behaviours associated with self-direction in their children. In addition, I hypothesize that a more cognitively stimulating and emotionally supportive home environment will be afforded to higher-SES children compared to their less affluent counterparts.

Hypothesis 3

Based on the current literature depicting the pernicious effects of poverty on child development, I predict that residing in an impoverished SES/community (Campos) will be associated with more emotional and interpersonal problems, a more negative self-perception, less academic success, and failure to acquire basic developmental skills (e.g., numbers, letters, language). Inversely, based on the greater prevalence of cooperation found among rural children relative to urban children (Eisenberg & Mussen, 1989), I expect that children residing in poor agricultural villages will display more prosocial behaviours relative to their urban counterparts.

Hypothesis 4

In keeping with the work of Kohn (1969), I propose that maternal parenting values will be linked with the type of home environment they provide as well as the quality of the relationship they have with their children. In this moderation hypothesis, I expect that a preference for conformity will be associated with a less stimulating and supportive home environment as well as more conflict in the parent-child relationship relative to parents who prefer self-direction. I predict that this association between conformity and a less favourable home environment will be stronger in the lower-SES households than in higher-SES families.

Hypothesis 5

In light of findings in North American research, I expect that maternal psychology (mother's psychological adjustment, stress in her parenting role, social support network) and parenting practices (quality of stimulation, support, and the parent-child relationship), will be linked with child development. I propose that maternal psychological symptoms and parenting

stress will be associated with less favourable child development, whereas the presence of a social support network and a stimulating, supportive, and harmonious family environment will lead to better child development. I also predict that certain dimensions of maternal adjustment and the home and family setting will be more strongly associated with some developmental aspects than others. For instance, I foresee that maternal adjustment, the provision of emotional support, and a good parent-child relationship will be more predictive of children's emotional development, whereas the presence of a cognitively stimulating home environment will be more predictive of children's acquisition of skills of an academic nature. I again predict that this association between maternal adjustment and quality of the home environment and children's development will be stronger in lower-SES households than in higher-SES families.

METHOD

Participants

The participants were 80 three year-olds, 154 six year-olds, 141 eight year-olds, and their primary caregivers. Because less than half of the children belong to a nuclear family structure (48% in the Campos and 46.2% in San Cristobal) the primary caregiver in my study is not always the mother. In the Campos, the primary caregiver was the mother (84.6%), grandmother (6.5%), aunt (.8%) or stepmother (1.6%). In San Cristobal, mothers (86.6%), grandmothers (6%), or aunts (4%) served as primary caregivers. Also, the 3, 6, and 8 years age categories were selected to represent the main periods in child development (infancy, preschool, and middle childhood). Sixty-three of the three year-olds (32 boys and 31 girls) belong to the Campos (small agricultural villages) sample (79%) and 17 children (nine boys and eight girls) belong to the San Cristobal

(higher-SES urban) sample (21%). Among the six year-olds, sixty-three (34 boys and 29 girls) belong to the Campos lower-SES sample (41%) whereas 91 (41 boys and 50 girls) belong to the higher-SES sample (59%). Sixty-two of the eight year-olds (44%) belong to the Campos (32 boys and 30 girls) and the remaining 79 (27 boys and 52 girls) belong to the San Cristobal sample (56%).

The Dominican Republic shares the island Hispaniola with Haiti. The majority of people in the Dominican Republic is Spanish speaking and claims to be Christian, with over 90% to 95% of these claiming Roman Catholicism as their religion. Also, due to the African influence, some voodoo beliefs are observed among the Dominican (Dominican Republic, 2005; Dominican Travel Guide, 2005). The Campos are small villages where inhabitants live off the land. They cultivate coffee, bananas, oranges, plantain, sugar cane, and many other agricultural products. Many families live in the mountains close to their conucos (gardens). Most heads of household in the Campos are labourers. The San Cristobal sample consists of middle-class urban families. The children attend private and semi-private schools (refer to Appendix A for children's specific Campos and San Cristobal locations).

More specifically, as I presented in Appendix B1, in the Campos, 62% of mothers need to carry their water from the river, whereas 99% of San Cristobal mothers have indoor water taps and 18% also have a water reservoir to ensure constant access to water. Also, only 55% of homes in the Campos have electricity, compared to 100% of the homes in San Cristobal, 15% of which also have an electricity generator to prevent an interruption of access to electricity. Furthermore, some Campos homes do not have bathroom facilities (11.3%) and many use outdoor nonflushing

bathrooms (45.2%), whereas most San Cristobal residences have indoor bathrooms (98%). San Cristobal homes also have better cooking facilities, more personal space, and more household items to facilitate daily chores. Moreover, the Campos' neighbourhoods are characterized by a lack of resources (refer to Appendix B2). Most residents have access to minimal supplies, limited means of transportation or recreation, as well as minimal educational and health care facilities, whereas these services are easily accessible in San Cristobal.

Children's family characteristics also significantly differ by SES/community. Campos mothers are younger, were younger at the birth of their first child, and have more children, which leads to more family members residing in a small-dilapidated dwelling. Campos parents also have a significantly lower level of education and earn a significantly lower salary. More specifically, a review of demographic information (refer to Appendix B3) revealed that fathers in the Campos sample predominantly have primary school education (73.3%) and are employed as blue-collar workers (96.4%), whereas most San Cristobal fathers have university degrees (55.8%) or professional training (18.6%) and are professionally employed (74.5%). Campos mothers also predominantly have primary school education (68.8%), in comparison with most San Cristobal mothers who mostly have university level education (66%). Lastly, significantly more Campos mothers are housewives (83%), whereas San Cristobal mothers are more often externally employed (57%).

Procedure

To recruit participants, I visited all the homes, one by one, in the Campos surrounding the village of Cambita-Garabitos in the province of San Cristobal. I decided to recruit participants in

this manner in order to include some of the more impoverished families who have not as of yet enrolled their school-age children in any academic institution. As I introduced myself, I presented the purpose of the study to the inhabitants and proceeded to inquire whether or not they had any children within the desired age-range. If so, I then invited them to participate in the research. In order to obtain their informed permission, I read the consent form and asked them to sign it (to consult consent forms refer to Appendix C). Illiterate mothers were encouraged to have the form read to them by another family member or neighbour to ensure that they did not sign a form they could not understand. With the exception of one mother, all Campos caregivers that qualified accepted to be part of the research. After having obtained the mothers' consent, I then provided them with a date on which I would be returning to their village to meet with them and assess their children. I conducted all interviews with Campos caregivers in their home setting in one or multiple visits, whereas I interviewed children in their yard in order to minimize disruptions to household activities. Although I administered some measures pertaining to child development to the child directly, other questionnaires assessing child development and socioemotional adjustment in children were filled out by the principal caregiver. Because many Campos mothers are illiterate or do not have any experience in filling out these types of paper and pencil tests, I read the questions aloud to them and documented their responses. These one-on-one interviews with mothers afforded me an opportunity to informally collect the demographic data and to obtain important information about their daily lives and beliefs. Moreover, I completed some observational measures on the neighbourhood characteristics during informal conversations with some of the inhabitants of the neighbourhood. When the schools opened in January, at the end of

the agricultural season, I obtained information regarding children's academic achievement and grades. I also handed questionnaires to the teachers who completed them independently and returned them to me upon my next visit. Lastly, by means of peer interviews conducted in the school setting, I obtained information pertaining to the children's social integration.

In the city of San Cristobal, I recruited the children and parent dyads in the school setting. I obtained permission for testing from the school authorities, the parents, and the students themselves by sending letters describing the study to the homes of randomly selected first, second, and third graders of two schools in San Cristobal, one private (Escuela Santa Rita) and the other semi-private (Colegio San Rafael). Aid from the Spanish Catholic Church is provided to both these academic institutions. Once the consent forms were returned, I sent home an envelope containing a series of questionnaires to be filled out by the maternal figure. In the interim, I interviewed the children, on an individual basis, either in an isolated section of the library or a small office. Teachers filled out the questionnaires independently. I then completed the peer nominations and sociometric choice nominations in the school setting. When parents returned the filled out questionnaires, as per our agreement, I then met with them in their dwelling in order to complete the home observation and answer any questions they may have had regarding the research. This also provided me with an opportunity to clarify any ambiguous answers on the questionnaires or omitted items. During these informal visits I also obtained important information on the realities and challenges of being a San Cristobal mother and wife.

Measures

Translation Procedure

All instruments used in this research are Western-based measures, as equivalent measures specific to the Dominican Republic population were not found. The measures that were not already available in Spanish by the original authors were translated carefully by a bilingual Dominican teacher. Consistent with the procedure recommended by Brislin (1970), Diaz, Nogueras, and Draguns (1984) and Wagatsuma (1977), the measures were then back translated to ensure comparability with the original English versions. Moreover, the tests already available in Spanish were reviewed to ensure that the vocabulary utilized would be familiar to the Dominican parents, teachers, and children. As a result, some Spanish words were modified for a more culturally specific expression. Also, because some of the participants are illiterate and have had no previous exposure to questionnaires, simplicity of expression was aimed at in the translation process. The questionnaires can be divided into five categories: (1) measures of the physical and social environment, (2) measures of maternal parenting stress, psychological adjustment, and social support, (3) a measure of maternal values, (4) home and family environment measures, and (5) child development and adjustment measures.

SES Measures

In an attempt to facilitate cross-cultural comparisons, several standardized measures of SES have been developed. Among these are Siegel's Prestige Scale (Siegel, 1971 in Bornstein et al., 2003), the Duncan Socioeconomic Index (Duncan, 1961), the Hollingstead Index of Social Position (Hollingstead, 1975 in Bornstein et al., 2003), and Treiman's Standard International

Occupational Prestige Scale (Treiman, 1977). The latter scale was developed by Treiman based on data collected on both developed and developing countries. It is based on the premise that the prestige given to a specific occupation is invariant across societies. Also, occupations that require more skills are more prestigious as knowledge is power. Furthermore, these occupations earn more money due to the scarcity of their specialized skills. In turn, when people have more money, they also have more influence. As such, Treiman's Standard International Occupational Prestige Scale is comprised of 509 occupations that can be grouped into eight occupational levels based on education and income.

Other researchers, such as Arias and De Vos (1996), have opted to measure the quality of the house materials. For instance, the House Quality scale is founded on the premise that, in developing countries, the construction material of one's dwelling is a good indicator of material wellbeing. This view is also supported by data from the United Nations (U.N., 1989). Because this scale can apply to all members of a society, it reportedly can serve for comparisons between and within groups as well as intra and inter country comparisons.

Following a review of some of the standardized SES measures, my choice of instruments was based on the focus of my research, namely the effects of maternal parenting on child development in the Dominican Republic. As such, I was most interested in the characteristics of the physical and social environment of parenting. In addition, because of the clear work division in the Dominican culture which states that men belong to the street and women belong to the home (Brea & Duarte, 1999), the measurement of SES by means of occupational status, the men's domain, did not seem appropriate. In addition, I questioned the premise that the prestige given to a specific occupation is invariant across societies. Consequently, I opted to simply

include parents' education level, occupation, and income information separately as demographic data (refer to Appendix B3 for occupation and education information). Instead, I preferred to include the House Quality scale which, as presented earlier, has been found useful for between and within group comparisons. In addition, I have developed measures to assess the neighbourhood characteristics and educational opportunities. While the use of the structured SES measures may have, as stated by Ganzeboom and Treiman (1996), facilitated intercultural comparisons, I believe that the measures I have opted to use are more in keeping with the purpose of my study. Therefore, in my Dominican study, I will use the term SES/community when referring to the sample's location which is either Campos and San Cristobal and refer to the house quality, neighbourhood resources, and educational opportunities scales as measures of the physical and social environment.

Physical and Social Environment Measures

Housing Quality scale (HQS, Arias & De Vos, 1996)

This scale was developed in order to assess the material wellbeing of inhabitants in a number of Latin American countries. As stated earlier, because this scale is based on the material of an individual's dwelling, it can apply to all members of a society and therefore can serve for comparisons between and within groups as well as intra and inter country comparisons. This scale is comprised of the following six items: (1) material of outer walls, (2) material of floors, (3) material of roof, (4) availability of electrical service, (5) type of sewage service, and (6) type of water service. The score of this housing quality scale is a simple arithmetic sum of the

components, with better quality materials receiving a higher score on the scale. Analyses support the internal consistency and construct validity of this measure (Arias & De Vos, 1996).

In the present Dominican sample, I found an Alpha of .86 for the total scale, which is within the range of 0.71 and 0.96 reported by the original authors. I describe the scale items and their respective correlation with the global scale in Appendix D1. Factor analysis using the Dominican data (refer to appendix D1) indicated that all items loaded on one factor (loadings ranging between .60 and .92), thus supporting the internal consistency of this scale. Furthermore, the original authors recommended that within the context of a specific study, the scale be used in conjunction with supplementary house-environment information. Indeed, when I added additional data on the home characteristics of the Dominican sample ($N = 393$), the scale's internal consistency improved ($\alpha = .96$). As I present in Appendix D2, the 11 additional items measured the physical features and organizational arrangement of the home, such as the quality of the building, number of rooms, type of furniture, access to water, bathroom, electricity, cooking facilities, and other electronic instruments such as a television, telephone, and washing machine. Reliability analyses using the Dominican sample indicated that some of the items on the additional scale (e.g., type of floor and electricity in home) had a higher correlation with the total scale than the original HQS items. Therefore, the new House-Material Quality scale (HMQS) that I will use in this research has 15 items, with an Alpha of .96. Furthermore, a factor analysis using the Dominican data indicated that all items loaded on one factor with loadings between .71 and .93, which further supports the internal consistency of this scale (refer to Appendix D2). In addition, as presented in Figure 2, scores on the HMQS are not normally

distributed when both samples are considered conjointly but are normally distributed within each SES sample independently (refer to Figures 3 and 4). This scale's ability to differentiate between the two SES populations lends support to its criterion-related validity. Moreover, its validity in prediction of group membership is further supported by a significant scale score mean difference $F(1, 352) = 1791.68, p < .001$ between the Campos and San Cristobal groups and minimal overlap between the two score distributions (range of 7.5 to 30 for the Campos sample versus a range of 28 to 44 for the San Cristobal sample).

Figure 2. House-Material Quality scale: Campos and San Cristobal

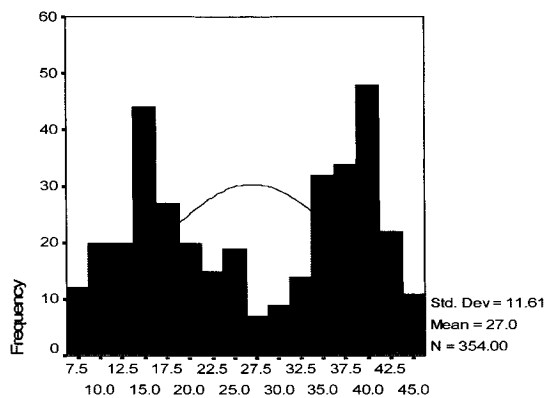


Figure 3. House-Material Quality scale: Campos

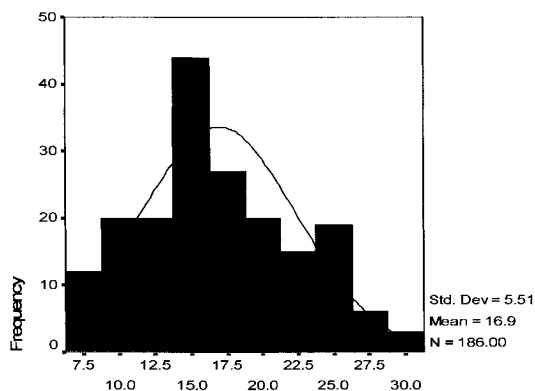
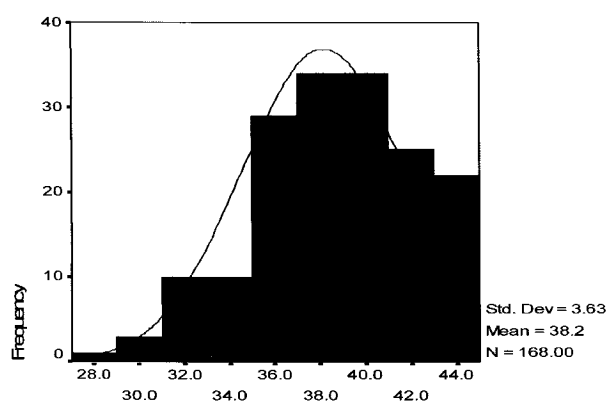


Figure 4. House-Material Quality scale: San Cristobal

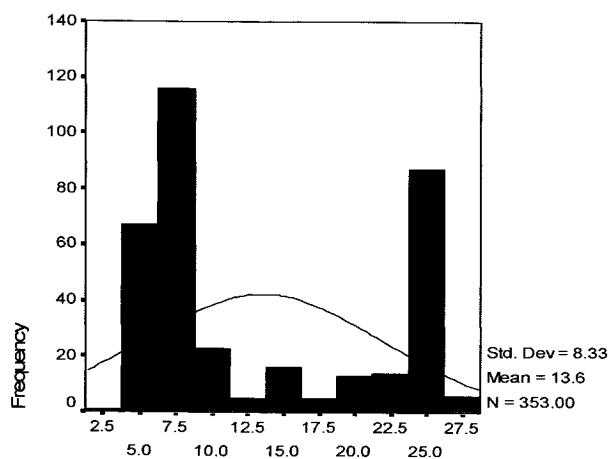


Neighbourhood scale

I developed the Neighbourhood scale to describe the differences between the impoverished rural population and the middle SES urban population that comprise my Dominican sample. As I presented in Appendix E1, these 19 items report on the resources available surrounding the place of residence and other facilities in the nearby community. I measured the presence of a pharmacy, medical clinic, primary school, private and public schools, pre-school program, high school, college, university, library, recreational activities, playground, religious institutions, Sunday school, employment opportunities, presence of professionals in the neighbourhood, transportation, variety of stores, police station, and fire station. The scale has an Alpha of .97, with correlations ranging between .69 and .93. As for the factor structure, there are two factors with an eigenvalue greater than one. The first factor, comprised of 11 items, appears to measure more common community resources, whereas the second factor, made up of the remaining eight items, taps into more specialized resources (presented in Appendix E2). Moreover, as I presented in Figure 5, scores on the scale are not normally distributed across the

entire sample but rather, they are normally distributed within each SES group, which lends support to the scale's criterion-related validity. The two peaks in Figure 5 represent each SES groups' mode on this scale, with the Campos sample having a modal score of eight and the San Cristobal sample obtaining a modal score of 25. Furthermore, its validity in the prediction of group membership is supported by a significant scale score mean difference $F(1, 351) = 821.85$, $p < .001$ between the Campos and San Cristobal groups as well as negligible overlap between the two score distributions (a range of 4 to 14 with a mean of 7 for the Campos sample, versus a range of 5 to 27.5 with a mean of 20.9 for the San Cristobal sample).

Figure 5. Neighbourhood scale: Campos and San Cristobal

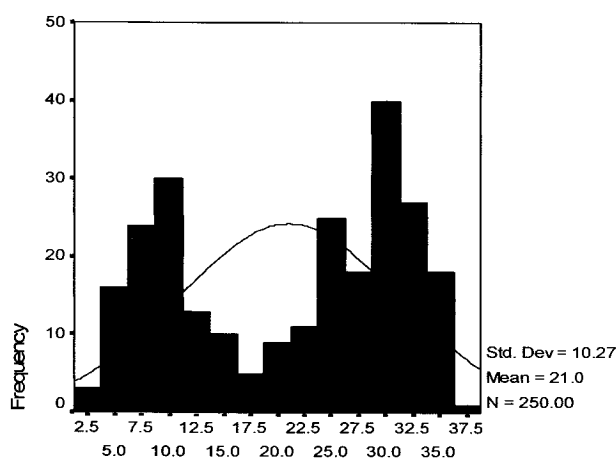


Educational Opportunity scale

I devised this scale mainly for comparisons of my rural and urban Dominican samples. It takes into consideration educational and professional attainment of the individuals in the children's microsystem (Bronfenbrenner, 1979), such as their parent's employment status, occupational status, educational attainment and level of literacy as well as the quality of the

educational institution the child attends. As I indicated in Appendix F, the Educational Opportunity scale's internal consistency is supported by an alpha of .94 and item correlations ranging between .59 and .86. Factor analysis results indicating that all items load on one factor, with loadings ranging between .70 and .91, further support the internal consistency of this scale. Again, additional support for the scale's criterion-related validity is found in the scale scores' normal distribution within each SES group but not in the sample as a whole (presented in Figure 6). Note that the two peaks in Figure 6 represent each group's modal score. The modal score of ten was obtained by the Campos sample whereas the San Cristobal sample obtained a modal score of 30. Once again, this scale's validity in prediction of group membership is supported by a significant mean difference $F(1, 248) = 1188.69$, $p < .001$ between the Campos and San Cristobal groups as well as minimal overlap between the two score distributions (range of 2.5 to 22.5 with a mean of ten for the Campos sample versus a range of 17.5 to 37.5 with a mean of 29 for San Cristobal sample).

Figure 6. Educational Opportunity scale: Campos and San Cristobal



*Measures of Maternal Parenting Stress, Psychological Adjustment, and Social Support**Parenting Stress Index-Short Form (PSI/SF, Abidin, 1990)*

The short-form (SF) is a direct derivative of the original version of the Parenting Stress Index. The authors did not modify the items to make the SF, but merely reduced the original number by keeping only the items with the highest loadings on the factors. This instrument measures the level of parental stress an individual is experiencing in order to identify parent-child dyads at risk of developing dysfunctional patterns of parenting and child behaviour problems. It assesses three principal dimensions: (1) parental distress (parent domain), (2) parent-child dysfunctional interactions, and (3) difficult child (child domain). The parent-child dysfunctional interactions dimension was added by the original authors following a factor analysis of questionnaires administered to low-SES Hispanic mothers in which a third dimension emerged from the original child and parent domain scales. They added this third scale to the instrument in order to improve the questionnaire's fit with Hispanic culture (Solis & Abidin, 1991). The PSI-SF can be administered to parents of children between 1 and 12 years of age. The respondents rate each item on a five-point scale (strongly agree, agree, not sure, disagree, and strongly disagree). The sum of the three 12-items subscales makes up the Total Stress score. The basic three-factor structure of the original PSI has been replicated transculturally, and the predictive, discriminant, and construct validity of the PSI have been similarly supported in international research. Even though, to date, most validity research has been done on the original version of the PSI, the authors base the validity of the SF on that of the original because it is a direct derivative of the original version and the two versions are highly correlated (Abidin, 1995).

More specifically, correlations of .94, .87, and .73 have been calculated between the two versions of the Parental Distress, Difficult Child, and Parent-Child Dysfunctional Interaction scales, respectively.

With my sample of Dominican mothers ($N = 353$), I found Alphas of .82, .83, .80, and .90 for the Parental Distress, Parent-Child Dysfunctional Interaction, Difficult Child, and Total Parenting Stress scales, respectively (refer to Appendix G1). Factor analyses revealed eight factors with an eigenvalue greater than one, although most of these explained small amounts of variance and were not easily interpreted. As detailed in Appendix G2, when I restricted the factor structure to three factors, most items (9 out of 12) loaded on their respective factor. Because the similarities in factor structure between the original structure proposed by the original authors and the structure obtained with Dominican sample are greater than the divergences, I computed all further analyses on the original scales proposed by the authors.

Brief Symptom Inventory (BSI, Derogatis & Spencer, 1975)

This adult self-report symptom inventory is an abridged version of the Symptom Checklist-90 (SCL-90). According to the original authors, the 53-items each measure a specific symptom that evaluate nine primary symptom dimensions: (1) Somatization, physical problems or discomfort; (2) Obsessive/Compulsive, thoughts and actions that the individual cannot control and are unwanted; (3) Interpersonal Sensitivity, feeling of interpersonal incompetence and self-doubt; (4) Depression, reduced interest in life and a dysphoric mood; (5) Anxiety, nervousness, tension and panic attacks; (6) Hostility, feelings or a desire to do certain actions related to the state of anger; (7) Phobic Anxiety, irrational and disproportionate fear reactions to a specific

person, place, object or situations; (8) Paranoid Ideation, disordered thinking such as a suspiciousness, grandiosity and delusions; and (9) Psychoticism, symptoms that vary between interpersonal isolation and a complete lack of contact with reality. Three global indices of distress can be calculated from these nine dimensions, namely the (1) Global Severity Index, (2) Positive Symptom Total, and (3) Positive Symptom Distress Index. The nine symptom dimensions are based on clinical literature and statistical analyses. The respondent assesses, on a five-point Likert scale, the extent to which he or she has experienced a specific symptom during the last seven days, with a zero rating indicating an absence of the symptom, a rating of four indicating an extremely high level of distress and a two rating serving as a mid-point level of distress. The additional-items scale is comprised of four items that load on many dimensions. According to the original authors, internal consistency results (Cronbach's coefficient alpha) for the nine symptom dimensions vary between .71 on the Psychoticism scale and .85 on the Depression dimension (Derogatis, 1993). Other researchers have reported internal consistency coefficients ranging between .78 and .83 on the BSI symptom dimensions (Croog, Levine, Testa, Brown, Bulpitt, Jenkins, Klerman, & Williams, 1986). Stability coefficients for a nonpatient sample of 60 individuals, who were assessed at a two-week interval, range between .68 and .91. These coefficients support the BSI's reliability (Derogatis, 1993). Also, correlation coefficients greater than .30 were found between the nine BSI symptom dimensions and the MMPI clinical scales, thus supporting the instrument's convergent validity (Derogatis, 1993). In addition, seven of the nine symptom dimensions were reproduced in a principal component analysis with varimax rotation. Among the divergences from the original structure, as noted by the authors, is a

split of the Phobic anxiety scale into two clinically recognized dimensions (panic anxiety and general anxiety). In addition, the Interpersonal sensitivity dimension was not represented.

According to the original authors, this could be explained by this dimension being comprised of only four items. The instrument's authors conclude that since the similarities in factor structure outweigh the divergences, the instrument's internal consistency and construct validity are supported (Derogatis, 1993).

With my sample of Dominican mothers ($N = 354$) I found an alpha of .95 on the Global Severity Index and Alphas of .81, .82, .49, .80, .72, .69, .60, .68, and .62 for the Somatization, Obsessive Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism dimensions, respectively. I also present the items and their respective Alphas in Appendix H1. A Principal Component Analysis with varimax rotation yielded 13 factors with an eigenvalue greater than one (refer to Appendix H2). Most items loaded on the Somatization scale (loadings range between .52 and .74) and the Obsessive-Compulsive scale (.60 and .75). Even though the Depression, Anxiety, and Hostility scales did not group under one factor, the dimensions of these scales remained interpretable. As for the Interpersonal Sensitivity, Phobic Anxiety, and Psychoticism scales, they did not emerge as distinct dimensions because all items scattered across different scales. My findings are consistent with those of the original authors in which the items of the Interpersonal Sensitivity and Phobic Anxiety scales also did not load on their respective factors. Because some of the scales in my Dominican data did not have an adequate Alpha and were not interpretable, I will include only the Somatization, Obsessive-Compulsive, Depression, and Anxiety dimensions, as well as the

Global Severity Index scores in further analyses. I opted to include some of these subscales because they are necessary to clarify the effects of the physical and social environment on mothers' psychological adjustment and mood.

Interpersonal Support Evaluation List (ISEL, Cohen & Hoberman, 1983)

This 40-item adult self-report questionnaire is intended to measure an individual's perceived availability of different types of social support: (1) tangible support, material aid; (2) appraisal support, having someone to turn to for advice; (3) self-esteem, assessment of one's status as equal to that of friends; and (4) belonging, feeling that one has people with whom to do a variety of activities. The original authors have conducted test-retest and various validity studies on the instrument and report an Alpha ranging between .62 and .84. The authors have also validated this instrument using a variety of samples (Bates & Toro, 1999; Cohen, Mermelstein, Kamarack & Hoberman, 1985). In particular, a test-retest reliability assessment over an interval of two days yielded correlation coefficients of .87 for the Total score and correlation coefficients of .67, .74, .78 and .84 for the Belonging, Self-esteem, Tangible, and Appraisal subscales, respectively (Bates & Toro, 1999). Brookings and Bolton (1988) performed a confirmatory factor analysis of data collected with college students in order to determine whether the ISEL does, in fact, measure distinct support dimensions. The authors report that a four-factor model fit the data reasonably well, thus supporting the questionnaire's construct validity. In addition, they maintain that in spite of the high correlation between the factors, which suggests the presence of a common underlying factor of social support, information would be lost if the specific unique contribution of each subscale was not considered (Brookings & Bolton, 1988).

As I presented in Appendix I1, data from my Dominican sample ($N = 354$) yielded an alpha of .81 for the Total scale and alphas of .57, .55, .66 and .68 for the Belonging, Self-esteem, Tangible, and Appraisal subscales, respectively. The Self-esteem subscale obtained the lowest internal consistency coefficient, which is congruent with the observations of other researchers (Bates & Toro, 1999). A factor analysis using principal components analysis produced 14 factors with an eigenvalue greater than one although most of these explained small amounts of variance and were not easily interpreted. When I restricted the analysis to four factors and used a varimax rotation, most items loaded on the Appraisal scale (loadings between .29 and .59) and the Self-esteem scale (.32 and .54), but only half of the items loaded on the Belonging scale (.39 to .59 loadings). As for the Tangible subscale, it did not present as a unified concept because most items loaded on factors other than their own. The other factor extraction techniques I tried produced very similar factor structures and loadings. The four factors are presented in Appendix I2. Consistent with findings from the original authors, the alpha of .81 for the Total Social Support scale with my Dominican sample attests to the common underlying dimension of interpersonal support tapped into by this questionnaire. However, it does not seem that the specific contributions of the Belonging, Self-esteem, Appraisal, and Tangible support subscales proposed by the authors are consistent with the specific experience of support in the Dominican women who were part of my sample. Therefore, I will henceforth restrict all my analyses to the Total Social Support scale.

*Measure of Maternal Values**Kohn's Rank Order of Parental Values (Schaefer & Edgerton, 1985)*

Parental values were measured using the Rank Order of Parental Values, a measure developed by Schaefer and Edgerton (1985) and adapted from Kohn's (1977) work. This 15-item questionnaire involves rank-ordering three lists of five behaviours parents value; six measure self-direction values, another six measure conformity, and three measure social values. Each rank order list is comprised of two self-direction items, two conformity items, and one social item. The respondents rank the most valued behaviour as one and continue until they reach five. These scores are later reflected (1 =5, 2 =4, 3 =3, 2 =4, 5 =1) in order to facilitate the interpretation of the data. A score on the conformity, self-direction, and social scales is computed by adding all the conformity items, self-direction items, and social items. The original authors support the instrument's internal consistency and construct validity with an alpha coefficient (Cronbach) of .74 for both the self-direction and conformity subscales (Edgerton & Shaefer, 1977).

*Measures of the Family Environment**Home Observation for Measurement of the Environment (HOME, Caldwell & Bradley, 1984)*

The HOME Inventory is referred to as the most widely used home environment measure (Bradley, Corwyn, Pipes McAdoo, & Garcia Coll, 2001; Sugland, Zaslow, Smith, Brooks-Gunn, Coates, Blumenthal, Moore, Griffin, & Bradley, 1995). There are four versions of the HOME Inventory, three of which I utilized in the present study: (1) Infant/Toddler HOME Inventory for children up to three years of age; (2) Early Childhood HOME for children ages three to six years; and (3) Middle Childhood HOME for children ages seven to nine years. All versions of the

HOME have undergone a thorough validation and norming process. The instrument has also been applied in many studies worldwide (e.g., Caldwell & Bradley, 1984; Bradley et al., 2001). The items on the HOME, selected to reflect what the scientific literature has demonstrated as promoting proper child development, are scored in a dichotomous fashion (yes or no). Scores for subscales are obtained by summing the individual item responses in that scale. The items are based on both maternal report and interviewer ratings of the physical environment and the parent-child interactions. The scale is administered during a 45 to 90 minutes interview with mothers in their home setting. The inventory is intended to be used for screening purposes; in order to measure the cognitive stimulation and the emotional support afforded to the children in their home environment. Associations have been found between all versions of the inventory and parent socio-demographic variables (mothers' education, fathers' presence, fathers' education, fathers' occupation, and crowding in the home) and children's social and cognitive development. Researchers have also noted an association between the HOME and certain parent characteristics (e.g., IQ, depression). Later studies using the HOME-SF found that poverty exerted a greater influence on the pattern of item endorsement than did ethnicity. Complex patterns of interaction between poverty and ethnicity were noted across the different HOME subscales. Outcome studies also confirmed the influence of various dimensions of children's home environment on cognitive, motor, and emotional/behavioural development. In addition, discriminant analyses revealed that the HOME was useful in identifying the environments associated with either average or retarded mental development (Bradley et al., 2001; Bradley, 1989; Bradley, 1993).

Infant/toddler HOME inventory. The Infant/Toddler version (0-3 years) is a 45 binary item scale with a six-factor structure: (1) Responsivity of mother, (2) Avoidance of restriction and punishment, (3) Organisation of the environment, (4) Appropriate play materials, (5) Maternal involvement, and (6) Variety in daily stimulation. The original authors report correlations between items and their own factor that ranged from .39 to .73. This factor structure was closely reproduced in other samples using a factor analysis with varimax rotation. The six subscales and total scale yielded alpha coefficients ranging between .49 and .84 with the Syracuse and New York sample and .44 to .89 with the Arkansas sample. The original authors judged these alphas to be acceptable, considering the low number of items on some of the subscales. Based on original data from 91 families in Arkansas, reliability coefficients (intra-class) range from .23 to .57 between the six and 12 months assessment, from .25 to .58 between the six and 24 months assessment and from .30 to .76 between the 12 and 24 months assessment. Overall, the authors of the HOME report good internal consistency and stability for the measure (Caldwell & Bradley, 1984).

With my Dominican sample ($N = 80$), the internal consistency of the HOME Total scale was supported by an alpha of .92. I calculated alphas of .73, .66, .65, .90, .69, and .54 for the Responsivity, Acceptance, Organisation, Learning materials, Involvement, and Variety subscales, respectively. The items in each subscale are presented in Appendix J1. No factor analyses data are available due to the limited size of my sample ($N = 80$). (Refer to the section on Amalgamation of HOME scales for a description of how I included the three versions of the HOME data in further analyses.)

HOME inventory for families of pre-school age children. The Early Childhood version (3-6 years) consists of 55 items that have been found, based on a factor analysis with varimax rotation, to cluster into eight factors: (1) Learning materials, (2) Language stimulation, (3) Physical environment, (4) Responsivity, (5) Academic stimulation, (6) Modelling, (7) Variety, and (8) Acceptance. The coefficients range between .53 and .83 for the subscales and .93 for the Total scale. According to the original authors, Kuder-Richardson and test-retest reliability estimates for the HOME support the scales' internal consistency and stability, even though the reliability for the subscales containing few items are somewhat lower (Caldwell & Bradley, 1984).

The analyses I did on the data from my Dominican sample (N = 119) revealed an alpha of .94 for the Total scale, which supports the internal consistency of the HOME. I computed alphas of .88, .70, .78, .66, .83, .26, .69, and .49 for the Learning materials, Language stimulation, Physical environment, Responsivity, Academic stimulation, Modelling, Variety, and Acceptance subscales, respectively (presented in Appendix J2). The higher internal consistency coefficient for the Learning subscale and lower internal consistency coefficients for the Modelling and Acceptance subscales, observed with my Dominican sample, have also been noted in research undertaken by the original authors with different ethnic and social status groups (Bradley, Corwyn, & Whiteside-Mansell, 1996). Other researchers have also noted that the Modelling scale did not present as a unified concept among Mexican mothers. Again, no information on the instrument's factor structure with my Dominican sample are available because the size of the sample (N = 119) did not allow for such analyses. As mentioned earlier, the manner in which I

included the HOME scales in further analyses is presented in the Section on the Amalgamation of HOME scales.

Middle childhood HOME inventory. The Middle Childhood version (7-9 years) contains 59 items clustered into seven factors: (1) Responsivity, (2) Encouragement of Maturity, (3) Acceptance, (4) Learning Materials, (5) Enrichment, (6) Family Companionship, and (7) Physical Environment. This version of the HOME is an extension by the original authors of the two earlier versions. Its reliability and validity are based on the earlier versions' psychometric properties since the same elements are being measured, namely, age-appropriate cognitive stimulation and emotional support (Caldwell & Bradley, 1984). Indeed, factor analyses executed on all short-versions of the HOME support the consistency across HOME versions. More specifically, this extraction technique yielded the same five factors for all HOME-SF versions: (1) Learning Stimulation, (2) Parental Responsiveness, (3) Spanking, (4) Teaching, and (5) Physical Environment. Studies using the abridged version of the instrument have also supported the validity of this measure across ethnic and social status groups and have highlighted its usefulness in discriminating home environments at risk for developmental delays from those that provide the appropriate stimulation and support to promote positive child outcome (Bradley et al., 2001).

Cronbach's coefficients calculated on my Dominican sample ($N = 131$) yielded an alpha of .91 for the Total HOME scale. As I presented in Appendix J3, the Alphas for the Responsivity, Encouragement of maturity, Acceptance, Learning materials, Enrichment, Family companionship, and Physical environment subscales were .72, .39, .66, .72, .62, .56, and .80,

respectively. The sample of 131 mothers did not allow for a factor analysis of this instrument. I executed all further analyses of the HOME scales as I described in the following section.

Amalgamation of HOME scales. Due to the low internal consistency coefficients of some scales and the high inter-subscale correlations, some researchers have done their research using groupings of scales as opposed to working with the HOME original scales (e.g., Sugland et al., 1995; Bradley et al., 2001). Others have opted to cluster HOME-SF items with the aid of factor analysis for the purpose of organizing the findings (Bradley & Corwyn, 2003). Based on the high correlation (.45 to .54) between the Language stimulation, Learning materials, Academic stimulation, and Variety of learning experiences scales, Sugland and colleagues (1995) created a composite HOME Learning scale. All subsequent analyses, by these researchers, were done using the HOME Learning, Physical environment, and Maternal warmth scales. Using the four forms of the HOME-SF, Bradley and Corwyn (2003) used factor analysis (maximum likelihood with varimax rotation) to group the questionnaire items under two factors namely Learning Stimulation and Parental Responsiveness.

In light of the low alphas for some of the HOME scales with my Dominican sample and in an effort to organize my findings, I submitted all versions to higher order factor analyses with varimax rotation. This extraction measure consistently revealed, across all three versions of the HOME Inventory, two underlying dimensions, namely, a cognitive stimulation factor and an emotional support factor (refer to Appendix J4). This two-factor structure is consistent with Bradley and Corwyn's (2003) findings and lends support to the stipulation that the HOME is a screening measure intended to capture the level of cognitive stimulation and emotional support

afforded to children in their home setting (Caldwell & Bradley, 1984; Bradley et al., 2001). For the Infant/Toddler version, the Organisation, Learning materials, Involvement, and Variety scales clustered on the Cognitive Stimulation factor ($\alpha = .92$) whereas the Responsivity and Acceptance subscales made up the Emotional Support dimension ($\alpha = .82$). The Learning material, Language stimulation, Physical environment, Academic stimulation, and Variety scales grouped onto the Cognitive Stimulation factor ($\alpha = .95$) whereas the Responsivity, Modelling, and Acceptance subscales clustered on the Emotional Support factor ($\alpha = .79$) for the Early childhood HOME version. The Middle childhood version grouped Learning material, Enrichment, Family Companionship, and Physical environment subscales on the Cognitive component ($\alpha = .90$) and the Responsivity, Encouragement of maturity, and Acceptance scales on the Emotional factor ($\alpha = .84$). The grouping of subscales on two dimensions is supported by subscale intercorrelations. A correlation coefficient of .51 was calculated between the two Emotional Support subscales for the Infant/Toddler version whereas the correlations range between .45 to .58 and .54 to .64 for the six and eight years versions, respectively. Correlations between subscales that clustered on the Cognitive Stimulation composite scale range between .56 to .74, .51 to .84, and .44 to .79 for the Infant/Toddler, Early childhood, and Middle childhood versions, respectively. In Appendix J5, I list the items that have clustered under each composite scale for all three age groups. I also list each item's correlation with the Total composite scale. Henceforth, I will execute all analyses on the two HOME composite scale scores, namely the Cognitive Stimulation and Emotional Support scale scores that were transformed into zscores.

Measures of Child Development: Development scales, Socioemotional Adjustment,

Self-Perception, Interpersonal Skills, and Academic Achievement

Child Development Inventory (CDI; Ireton, 1992)

This 300-item parent-report inventory was developed by the original author to replace the Minnesota Child Development Inventory (MCDI) and is intended to serve as a screening measure of the present development of children aged between 15 months and 6 years. It was developed following recognition of the importance of including parents in the child assessment process. Eight developmental areas are assessed by the CDI: (1) Social, interaction with parents, children, and adults; (2) Self-help, independence and responsibility; (3) Gross motor, running, balance and co-ordination; (4) Fine motor, eye-hand co-ordination; (5) Expressive language; (6) Language comprehension; (7) Letters, knowledge of letters, printing and reading; and (8) Numbers, knowledge of quantity and numbers. Some items are extracted from each of these scales in order to calculate the General Development scale. The last 30 items of the inventory measure parents' concerns regarding their children's physical, behavioural, and emotional development. These scales were not derived by factor extraction techniques. Rather, they are based on areas of development that have been identified in the child development literature. The inventory consists of a booklet of 270 statements. Parents document on an answer sheet whether or not the statement describes their children's behaviour. The scale score is a summation of all the affirmative responses. Children's development profile is calculated by comparing a child's score on each scale to the results obtained by children in the same age range (original norm sample N = 568). The age level of all items is based on a 75% success rate by the norm sample. Children's

scores can be interpreted as within age expectations, borderline (25% below age cut-off or one and a half standard deviations below the mean) or delayed (30% below age cut-off or two standard deviations below the mean). The authors do, however, recommend caution in using this inventory with a population different from the white middle-class American sample on which it was validated. In respect to the instrument's construct validity, the CDI developmental scales have been found to correlate with age (.84) and reading achievement among kindergarten children (.35 to .69). Moreover, the CDI scores successfully identified the children enrolled in a program for children with special needs (Ireton, 1997).

The internal consistency coefficient of this inventory with my Dominican sample (N = 194) was of .98 for the Total scale. As I presented in Appendix K, Alphas for the Social, Self-help, Gross motor, Fine motor, Expressive language, Language comprehension, Letters, Numbers, and General Development Index were .89, .92, .89, .95, .93, .94, .96, .91, and .96, respectively. In Appendix K, I also present the subscale items and every item's correlation with its own factor. No factor structure data are available because my sample size (N = 194) did not allow for such analyses. Nevertheless, based on the high Alphas (.89 to .96) for all the development subscales, it was decided that they would all be included in subsequent analyses. In addition, to allow for further analyses, the scale scores were standardized across age groups.

Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997)

The SDQ is a 25-item behavioural screening questionnaire for children aged between three and 16 years. Each item measures a psychological attribute and has been inspired by the Diagnostic and Statistical Manual- fourth edition (DSM-IV) diagnostic categories (Goodman,

1997). The 25 items are equally divided on five scales: (1) Emotional symptoms, (2) Conduct problems, (3) Hyperactivity/ Inattention, (4) Peer relationship problems, and (5) Prosocial behaviour. A Total Difficulties score is obtained by summing the four problem scales whereas the Prosocial scale, an indication of children's positive attributes, is the sum of the prosocial behaviour items. Identical versions of the questionnaire are available for both parents and teachers. This screening questionnaire can be completed in five to ten minutes. To date, it has been translated into 40 languages (Goodman, 1997). Goodman and Scott (1999) report good reliability and validity for the SDQ. More specifically, using a British sample of 10, 438 5 to 15 year-old children, Goodman (2001) submitted their SDQs scores to a factor analysis. These analyses confirmed the five-factor structure he proposed, which in turn supports the instrument's construct validity. According to the author, all items loaded on their respective factors for all three types of raters (e.g., parent, teacher, and self). Goodman (2001) also reports alphas of .82, .67, .63, .77, .57, and .65 for the Total Difficulties, Emotional, Conduct, Hyperactivity-Inattention, Interpersonal, and Prosocial subscales on the SDQ parent version. Alphas of .87, .78, .74, .88, .70, and .84 are reported for the Total Difficulties, Emotional, Conduct, Hyperactivity-Inattention, Interpersonal, and Prosocial subscales of the teacher version (Goodman, 2001). These acceptable alphas support the internal consistency of both rater forms of the SDQ. Good retest stability is supported by a mean correlation of .62 after an interval of four to six months. Additionally, the instrument's convergent validity is supported by the high correlation between SDQ scores and those obtained on the Rutter questionnaires (Goodman, 1997) and the Child and Behaviour Checklist (correlations range between .71 and .87) (Goodman & Scott, 1999). Also,

studies found that the SDQ did not differ in its ability to discriminate between a psychiatric and non-mental health population relative to both longer measures, thus lending support to its predictive validity. Moreover, Goodman and Scott (1999) report that based on interview-based data, the SDQ was better than the CBCL at identifying inattention and hyperactivity and equally good at identifying internalizing and externalizing problems. Furthermore, based on a sample of 7,984 British children aged 5 to 15 years, the SDQ questionnaires filled out by multi-informants (parent, teacher, pupil) successfully identified two-thirds of individuals with a psychiatric diagnosis (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). Lastly, when asked which questionnaire they prefer, parents of low-risk children were significantly more likely to prefer the SDQ to the CBCL (Goodman & Scott, 1999).

SDQ- parent version. Using my Dominican data, I calculated an alpha of .68 for the Total scale ($N = 353$), whereas I obtained Alphas of .58, .61, .63, .32, .72, and .77 for the Emotional, Behavioural, Hyperactivity, Interpersonal, Prosocial, and Total problem scales, respectively (refer to Appendix L1). As I presented in Appendix L2, a factor analysis using maximum likelihood with varimax rotation revealed the factor structure most consistent with that reported by the original author. Four of the five items loaded on the Emotional subscale, three items loaded on the Behaviour and Hyperactivity scales, and all of the prosocial items loaded on their factor. Because all but one interpersonal item loaded on other factors, this test dimension did not present as a unified concept. For these reasons, I will include only the Total problem and Prosocial scales in subsequent analyses.

SDQ- teacher version. The internal consistency of the SDQ-teacher version with my Dominican sample is supported by an alpha of .75 for the Total scale. The Alphas I obtained for the Emotional, Behavioural, Hyperactivity, Interpersonal, Prosocial, and Total difficulties scales were .68, .78, .79, .53, .77, and .87, respectively (refer to Appendix L3). A maximum likelihood analysis with varimax rotation yielded the factor structure most consistent with the questionnaire's original structure. As I indicated in Appendix L4, the Emotional, Behavioural, and Prosocial items loaded on their respective factors whereas three out of five items loaded on the Hyperactivity factor. Once again, in my Dominican sample, the Interpersonal scale did not present as a unified concept because the items loaded on other scales. As previously mentioned, henceforth, I will restrict all analyses on the SDQ to the two primary dimensions of the behavioural screening questionnaire, namely, the Total Difficulties and Prosocial scales.

Peer Nomination

The peer nomination technique is a method of assessment to quantify a child's global degree of inclusion and exclusion from his peer group as assessed by his/her same classroom peers (Williams & Gilmour, 1994). During an individual interview, I presented children with a list of the students in their classroom and asked them to identify the three classmates with whom they liked to play with most and the three with whom they liked to play with least. I accepted both same-sex and cross-sex nominations. I then computed and standardized the total number of like and dislike nominations for each child within each classroom to adjust for differences in the number of nominators.

In the literature, there is support for a moderate stability of children's sociometric status (Williams & Gilmour, 1994). Coie, Dodge, and Coppotelli (1982) report reliability coefficients ranging between .46 and .88 (average of .65) on the sociometric status category scores at a 12 week test-retest interval. The rejected status displayed the greater reliability, with these children being more likely to remain in this category, whereas the neglected children were most inclined to alter their sociometric status (Coie & Dodge, 1983; Gresham & Stuart, 1992; Asher & Dodge, 1986; Ollendick, Greene, Francis, & Baum, 1991).

Sociometric Choice Nominations/ Peer Assessment

Following the administration of the peer nomination interview, I read ten behavioural descriptors (e.g., starts fights, is disruptive, angers easily, is co-operative, is a leader, is good at sports, is funny, is unhappy, likes to play alone, and is the tallest) to the children and asked them to nominate the child who best fit each descriptor (up to three nominations were accepted per descriptor). I derived the first eight items from the scale presented in Coie and Dodge (1988), whereas the last two descriptors I introduced as fillers. Because time did not allow for the administration of longer peer assessment instruments (e.g., Revised Class Play, Pupil Evaluation Inventory, Social Behaviour Assessment, Guess Who scale, Walker Social Skills Curriculum, Friendship Quality Questionnaire, and Peer-report Measure of Internalising and Externalising Behaviour), I administered a reduced number of descriptors. By calculating the total number of nominations a child received for each item, I generated scores for each descriptor. I then standardized these scores within each classroom to adjust for the number of nominators. A principal component analysis with varimax rotation of the descriptors (as per Coie & Dodge,

1988) revealed three factors, namely, the Aggression (Alpha = .86), Prosocial (Alpha = .77), and Social Isolation (Alpha = .64) factors (refer to Appendix M1 and M2).

The validity of the sociometric choice nomination technique is supported by comparisons between peer ratings of aggression and withdrawal and trained observers' coding of these school age children's overt social behaviour in the schoolyard. The authors concluded that children are accurate reporters of peers' interpersonal style (Serbin, Lyons, Marchessault, Schwartzman, & Ledingham, 1987).

Self-Perception Profile for Children (8-12 years) (Harter, 1985)

This 36-item scale is a revised version of the Perceived Competence scale for Children (Harter, 1985). It was developed in order to measure the child's perceived competence in specific areas such as: (1) Scholastic competence, child's perception of his or her school-related abilities; (2) Social acceptance, peer acceptance and whether the child feels popular and liked by most peers; (3) Athletic competence, child's perceived competence in sports and outdoor games; (4) Physical appearance, child's satisfaction with his or her appearance; and (5) Behavioural conduct, child's level of comfort with his or her behaviour and the degree to which he or she feels he/she does the right thing; as well as (6) the child's Global self-worth, his/her satisfaction with his/her person and the manner in which he/she is living his/her life. Each subscale contains six items and gives a separate score, thus providing a more detailed profile of a child's perception of self. In this questionnaire, the child's view of personal worth is not inferred but rather measured by directly asking the child questions related to perceived worth in all of the specific domains. Harter (1985) adopted a question format in which the child chooses between the

statements that describe most the type of kid he or she is. Then he/she assesses whether this statement is really true for him/her or only sort of true. Answers range from one to four, a one indicating low perceived competence and a four indicating high perceived competence. Based on four samples of third, fourth, sixth, and seventh grade students in the US, internal consistency (Cronbach's alpha) ranged between .80 and .85 for the Scholastic competence subscale, between .75 and .80 for the Social acceptance subscale, between .80 and .86 for the Athletic competence subscale, between .76 and .82 for the Physical appearance subscale, between .71 and .77 for the Behavioural conduct subscale, and lastly, between .78 and .84 for the Global self-worth subscale. Harter (1985) also tested the factor structure of the instrument on the four American samples mentioned earlier. Because the Global self-worth scale is influenced by the other domain-specific scales that are important to each individual and, consequently, does not load as a distinctive factor, the author did not include these items in the factor analyses. Results revealed that the Athletic competence and Physical appearance dimensions consistently loaded as distinctive factors. On the other hand, for one of the US samples, the Scholastic and the Social acceptance scales clustered on one factor whereas for the other elementary school sample, the Scholastic competence and Behavioural conduct subscales loaded as one factor. The original author noted that the subscale that loaded with the Scholastic competence subscale was determined by the philosophy of the school milieu, more specifically, whether it placed a greater emphasis on peer acceptance or behavioural compliance. Moreover, the influence of the social milieu on the factor loadings was more strongly noted in the younger sample, suggesting that it is the product of a less differentiated self-perception (Harter, 1985).

The internal consistency of the Spanish version of the Self-Perception Profile for Children with my sample of 132 Dominican eight year-old children was supported with an alpha of .83 for the sum of all the subscales. The alphas I obtained for the Scholastic competence, Social acceptance, Athletic competence, Physical appearance, Behavioural conduct, and Global self-worth subscales were .52, .40, .42, .79, .72, and .57, respectively (presented in Appendix N1). Concerning the factor structure, I did not reproduce the original five specific domain factor organisation with my sample of Dominican children. The Physical appearance and Behavioural conduct domains loaded as separate factors, whereas the other three factors were a mixture of the Scholastic competence, Social acceptance, and Athletic competence domains. In light of this result, I submitted the six domain scales to a higher order factor analysis. As I presented in Appendix N2, a higher order factor analysis on the six domain scale scores yielded two self-perception factors. The Social acceptance, Physical appearance, and Global self-worth scales loaded as one factor, whereas the Scholastic competence, Athletic competence, and Behavioural conduct scales loaded as a second factor. For scale loadings on their factor, refer to Appendix N2. One scale appears to measure the child's satisfaction with self and his or her life as well as the positive feedback received by others about his/her person (Social and Personal Self-Perception scale), whereas the second factor appears to tap into the extent to which the child has succeeded in meeting the demands and skills of the school setting (School and Athletic Self-Perception scale). The division of self-concept into these two components (personal and academic) closely resembles Marsh's (1990, in Gottfried et al., 2003) two higher-order rubrics of academic self-concept and general self-concept using the Self-Description Questionnaire.

Furthermore, alphas of .80 and .72 for the Social and Personal Self-Perception and School and Athletic Self-Perception scales support the internal consistency of these two self-perception dimensions (refer to Appendix N2). For that reason, I will restrict all further analyses using the Self-Perception Profile for Children to these two Self-Perception composite scales.

Academic Achievement

I measured children's academic success by teachers' report of students' present academic grade on all academic subjects as well as their overall academic grade. The academic achievement score I used in the present study is the grade that appeared in the children's reports card for the academic year in which they were studied.

RESULTS

I have divided the presentation of results into five sections, each corresponding to one of my hypotheses. I will first present data on the physical and social environment. In the second section, I will present data on maternal psychology, parenting practices and values, by SES/community. Thirdly, I will present the child development by SES/community. The data in the first three sections are comprised of correlation matrices and MANOVAs, in order to determine location differences in outcome variables. Afterwards, I will present regression analyses to determine the association of parental values with parenting practices. The fifth and last section is comprised of regression analyses, the purpose of which was to determine the association of maternal characteristics and the HOME and family environment with children's development. However, prior to the presentation of my findings, I will briefly discuss correction for multiple comparisons and variable transformations.

Correction for Multiple Comparisons

In my study, I measured several outcome variables, which invariably leads to multiple comparisons. Because of the risk of increasing the Type I error rate due to multiple testing, it is suggested that a more stringent alpha level be used by making a Bonferroni adjustment for the number of comparisons (Tabachnick & Fidell, 2001; Kirk, 1982). Using the Simple Interactive Statistical Analysis (SISA) (Uitenbroek, 1997), it is suggested that I lower my alpha on individual analyses to .001 (Bonferroni adjustment). Nevertheless, if the chance of incorrectly identifying a difference on an individual test is reduced by making a Bonferroni correction, the chance of making a Type II error is increased, namely, not finding a difference where one exists (Uitenbroek, 1997; Perneger, 1998). Also, with correlated multiple outcomes, the Bonferroni correction is reportedly too conservative (Perneger, 1998). Consequently, in the case of correlated variables, a corrected alpha is required which is in between no correction at all and a full Bonferroni correction (Uitenbroek, 1997). A new calculation of the suggested alpha adjustment taking into consideration the correlation between outcome variables suggests that I lower my alpha on individual analyses to .007. Therefore, out of consideration of both Type I and Type II errors as well as the association between outcome variables, I decided that the Bonferroni adjustment would be too conservative. I thus propose to interpret only findings at the .007 as suggested by the Sidak adjustment (for more information on the Sidak adjustment refer to Yarnold & Soltysik, 2005; Kirk & Natanegara, 2001; Perneger, 1998).

Variable Transformation

The process of variable transformation followed the recommendations of Tabachnick and Fidell (2001). The authors recommend the use of data transformation in order to improve the normality, linearity, and homoscedasticity of residuals and thus enhance the analysis. Variable transformation is further suggested if data are nonnormal in different ways (e.g., some variables are positively skewed and others negatively skewed) and to reduce the impact of outliers. With my data, many variables were not normally distributed. For instance, skewness scores obtained by dividing the skewness by the standard error score ranged between four and ten which is out of the plus or minus two accepted range. Kurtosis scores as high as 11 were obtained, which is again out of the accepted range of deviation from normality. Moreover, the variables did vary in different ways with some being positively skewed and others being more negatively skewed. There were also outliers in my data. Lastly, Tabachnick and Fidell (2001) advise that the use of transformation on well known scales hinders the data interpretation process. However, if the scales are arbitrary as they were for most of my variables, transformation does not, according to the authors, notably increase the difficulty of interpretation. These factors supported my decision to proceed with a transformation of data. Transformations used were the square root (SQRT), log (LG10), inversion, and reflecting plus either the SQRT and LG10. A square root transformation was used on the Parenting Stress Index Difficult Child scale, both teacher and parent versions of the Strengths and Difficulties Total Difficulties scales as well as the Somatization, Depression, Anxiety, Obsessive-Compulsive Disorder, and Global Severity scale of the Brief Symptom Inventory. The academic achievement score, the General Development and Numbers subscales of the Child Development Inventory, the Social and Personal Self-Perception scale, and the

Parent version of the Strengths and Difficulties Questionnaire Prosocial subscale were reflected (Tabachnik & Fidell, 2001) and then squared in order to correct moderate negative skewness. A logarithmic transformation was applied to the Parenting Stress Index- Parental Distress subscale whereas the Parent-Child Dysfunctional Interaction subscale was inverted. The Gross Motor, Self-Help, Language Comprehension, and Expressive Language subscales of the Child Development Inventory as well as the Interpersonal Support Evaluation List scale were reflected and then logarithmically transformed. No transformation was applied to the Letter subscales since all transformations merely changed the direction of the skewness but did not improve its distribution. The Fine Motor and Social subscales of the CDI, the School and Athletic Self-Perception scale, and the Teacher version of the Strengths and Difficulties Questionnaire Prosocial subscale were also not transformed because they were already normally distributed and no transformation improved their distribution. Most transformed variables obtained skewness and kurtosis scores that fell within the acceptable range after transformations. A few variables such as the gross motor and language comprehension scales of the CDI remained somewhat outside the acceptable range but transformations nonetheless greatly improved their distribution with skewness scores decreasing from 8.43 to 2.86 and 9 to 2.62, respectively. Also, the transformation of the numbers scale was only somewhat helpful (3.47 to 3.28). Overall, as mentioned earlier, prior to transformations the kurtosis scores ranged between .02 and 11.4 and the skewness scores ranged between 1.47 and 10.27. After transformations, I obtained skewness scores ranging between .06 and 2.86 and kurtosis scores ranging between .035 and 1.82 (refer to Appendix O).

Physical and Social Environment of Poverty

Intercorrelations among Physical and Social Environment Measures

By means of three measures and one demographic variable, I assessed the characteristics of the two SES communities. Quality of the house material and family income are measures of both children and parent's proximal environment, whereas the neighbourhood resources and educational opportunities scales are measures of the family's extended environment. In order to determine the association between these different dimensions of the SES context, I computed a Pearson correlation. As I presented in Table 1, all measures of the physical and social environment were intercorrelated for both SES samples with the exception of the neighborhood scale for the Campos sample which did not correlate with the others.

SES/Community Differences

In order to examine my primary hypothesis that children in the Campos and San Cristobal reside in distinct physical and social environments, I computed a multivariate analysis of variance (MANOVA) with the house-material quality scale, the educational opportunities scale, and the two dimensions of the neighbourhood scale as dependent variables. A significant multivariate main effect of location was found: $F(4, 242) = 462.86, p < .001$. As shown in Table 2, univariate analyses revealed that the Campos and San Cristobal environments differ significantly ($p < .001$) on both proximal and distal environment measures, with San Cristobal children benefiting overall from a better physical and social context. They reside in better homes

Table 1

Intercorrelations among Physical and Social Environment Measures

	1	2	3	4	5	6
1. Family Income	---	.372***	.072	.122	.031	.385***
2. House-Material Quality scale	.678***	---	.047	.096	.012	.584***
3. Neighbourhood scale	.248**	.296***	---	.785***	.939***	.021
4. Neighbourhood- Specialized Services	.206**	.190**	.929***	---	.525***	.071
5. Neighbourhood- Common Resources	.238**	.348***	.940***	.747***	---	-.013
6. Educational Opportunities scale	.440***	.528**	-.370***	.355***	.341***	---

Note. Intercorrelations for the Campos participants (n = 186) are presented above the diagonal, and intercorrelations for San Cristobal participants (n = 167) are presented below the diagonal.

** p < .01; *** p < .001.

Table 2
Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) Results for Differences between SES/Communities on Four Physical and Social Environment Measures

Variable	Campos		San Cristobal		ANOVA
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
House-Material Quality scale	17.39	5.37	38.26	3.65	1321.38***
Neighbourhood Resources scale- Health and Educational Institutions	5.04	1.09	13.94	3.69	577.65***
Neighbourhood Resources scale- Cultural and Professional Development Institutions	2.19	.66	6.80	3.27	204.74***
Educational Opportunities scale	10.17	4.39	28.99	4.20	1169.35***

***p < .001.

located in neighbourhoods with more health and educational institutions and more opportunities to participate in cultural and professional development. Moreover, they are afforded significantly better educational opportunities (refer to Appendices B1-B3). In addition, as I presented in the Participants section, demographic data also support the differences between Campos and San Cristobal children's proximal and distal physical environments. I computed a multivariate analysis of variance with the demographic variables. There was a significant multivariate effect for location: $F(11, 272) = 94.67, p < .001$. As shown in Table 3, univariate tests indicated that children's family characteristics differ significantly ($p < .001$) on every dimension except for father's age and number of adults in the household.

Differences in Maternal Psychological Adjustment, Parenting Stress,

Social Support, and Parenting Values by SES/Community

In order to verify my second hypothesis that maternal adjustment, parenting stress, social support, parenting values, HOME environment, and parent-child relationship, differ in both SES/communities, I calculated a Pearson correlation between the measures of the physical and social environment and these variables by location. I determined whether these outcome variables differ significantly by SES environments by means of a MANOVA computed on all these groups of variables, also by SES/community. I also calculated a Wilcoxon Mann-Whitney Test on maternal parenting values by SES/community. In addition, I computed SES differences using only location as an independent variable, because, as presented previously, differences in parents' education, income, and living conditions co-varied so strongly with SES/community that additional comparisons using these independent variables would be redundant.

Table 3

Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) Results for Differences between SES/Communities on Demographic Variables

Variable	Campos		San Cristobal		ANOVA F
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Age Mother	31.35	6.91	34.59	5.62	17.95***
Age Father	36.68	8.51	37.68	6.97	1.12
Age of Mother at Birth of First Child	20.33	4.00	24.97	4.26	88.66***
Number of Siblings	5.06	2.94	3.07	1.14	50.04***
Number of Family Members in the Household	6.40	2.32	4.78	1.07	51.44***
Umber of Adults in the Household	2.22	.86	2.18	.72	.216
Number of Children in the Household	4.19	2.07	2.64	.74	62.74***
Maternal Educational Attainment	5.10	3.85	14.84	2.30	617.61***
Paternal Educational Attainment	5.37	3.69	14.44	2.42	557.36***
Total Family Income (per month in pesos)	2557.52	1431.14	15695.94	10215.11	259.94***
Number of Employed Adults in the Household	1.08	.35	1.61	.97	40.70***

*** p < .001.

*Maternal Social Support, Parenting Stress, and Psychological Adjustment**Intercorrelations between Physical and Social Environment Measures and Maternal Social Support, Parenting Stress, and Psychological Adjustment Variables*

Tables of the intercorrelations of physical and social setting measures and maternal variables appear in Table 4. As I presented, 7 and 12 correlations out of 28 were significant ($p < .01$) for the Campos and San Cristobal samples, respectively. For both SES groups, most of the significant correlations are found between the maternal variables and the House Material and the Educational Opportunities scales.

Maternal Social Support, Parenting Stress, and Psychological Adjustment by SES/community

I compared maternal interpersonal support, parenting stress, and psychological wellbeing according to SES/community. I found significant multivariate effects for location: $F(7, 326) = 19.79, p < .001$). As presented in Table 5, Campos mothers report significantly ($p < .001$) more interpersonal support and less parental distress ($p < .001$) relative to their more affluent counterparts. Although primary caregivers from both contexts do not seem to differ on the BSI-Global Severity Index, or the depression and anxiety scales, Campos mothers endorsed significantly more Somatization ($p < .001$) symptoms than San Cristobal mothers (refer to Appendix P for BSI T-scores).

Table 4

Intercorrelations of Physical and Social Environment Measures and Measures of Maternal Social Support, Parenting Distress, and Psychological Adjustment

Variables	Income		House-Material Quality scale		Neighbourhood scale		Educational Opportunities scale	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. ISEL- Total Support scale	-.103	.299***	-.134	.320***	.119	.127	.097	.260**
2. PSI- Parenting Distress	-.134	.229**	.429***	-.326***	-.118	.227**	.266**	.282***
3. BSI-Global Severity Index	-.090	-.151	.250***	-.196**	-.033	-.018	.214*	-.265**
4. BSI- Somatization	.146*	-.077	.181**	-.120	.004	-.113	.244**	-.232**
5. BSI- Obsessive Compulsive	-.005	-.109	-.240***	-.184*	-.060	-.037	.154	-.229**
6. BSI-Depression	-.076	-.053	-.156*	-.077	-.068	-.044	.089	-.177*
7. BSI- Anxiety	-.005	-.106	.175**	-.157*	.010	-.084	.126	-.327***

Campos (n = 185) and San Cristobal (n = 135)

* p < .05; ** p < .01; *** p < .001.

Table 5

Means, Standard Deviations, and One-Way Analyses of Variance (ANOVA) Results for Differences between SES/Communities on Measures of Maternal Social Support, Parenting Distress, and Psychological Adjustment

Variable	Campos		San Cristobal		ANOVA $\bar{F}$
	$\bar{M}$	$\bar{SD}$	$\bar{M}$	$\bar{SD}$	
Interpersonal Support Evaluation List-Total score *	.66	.28	.79	.28	17.21***
PSI- Parental Distress scale	1.31	.12	1.40	.14	40.49***
BSI- Global Severity scale	.85	.31	.80	.34	2.39
BSI- Somatization scale	.97	.43	.67	.43	40.39***
BSI- Obsessive Compulsive scale	.70	.44	.83	.47	6.23*
BSI- Depression scale	.76	.49	.71	.43	.91
BSI- Anxiety scale	.89	.39	.79	.52	4.24*

Note. The Interpersonal Support Evaluation List-Total score variable has been reflected. As such, the direction of the relationship of this variable needs to be reversed for interpretation.

* $p < .05$; ** $p < .01$; *** $p < .001$.

*Maternal Parenting Values**Intercorrelations between Parental Values and Social Class Indicators and Physical and Social Environment Measures*

As I presented in Table 6, maternal parenting values were associated with social class indicators and measures of the physical and social environment. Because conformity and self-direction values had a directly inverted relationship with all variables, only the variables' relation with conformity will be commented. Pearson correlation analyses indicate that Campos mother's preference for conformity is significantly negatively correlated ($p < .001$) with her education level and the educational opportunities scale score. Higher-SES San Cristobal mothers' preference for conformity was not significantly associated with any of the social class indicators or physical and social environment measures.

Maternal Parenting Values by SES/community

I compared maternal parenting values, as assessed by the ROPV, using the Mann-Whitney non-parametric test for rank data. As I presented in Table 7, parents in both environments differed significantly on their parenting values ($p < .001$). San Cristobal mothers privileged self-direction ($p < .001$) whereas Campos mothers preferred conformity ($p < .001$). No differences were noted on the importance they placed on the development of social values.

Table 6

Pearson Correlations: Parental Values with Social Class Indicators, Physical and Social Environment Measures, and HOME/ Family Characteristics

Variables	Conforming Values	
	Campos	San Cristobal
<u>Social Class Indicators</u>		
Mother's education (in academic years)	-.266***	-.143
Father's education (in academic years)	-.162*	-0.079
Number of siblings	.148*	-0.075
Total family income (in pesos per month)	-.121	-0.107
<u>Physical & Social Environment Measures</u>		
House-Material Quality scale	-.162*	-0.108
Neighbourhood scale	-0.075	-.162*
Educational Opportunities scale	-.310***	-.162
<u>HOME/ Family Environment</u>		
Cognitive Stimulation	-.130	-.158
Emotional Support	-.193**	-.263**
Parent-Child Relationship (PSI-PC)	-.170*	0.127

Note. Since the conformity and self-direction variables are highly correlated (.75) and a positive correlation between one variable and conformity results in a similar correlation in the opposite direction with self-direction, only the correlations with the conformity value are presented above.

Spearman correlations yielded an identical pattern of findings.

* $p < .05$; ** $p < .01$; *** $p < .00$

Table 7

Mean Rank of Parental Values by SES/Community

	Campos	San Cristobal	Mann- Whitney
	Mean Rank	Mean Rank	<u>U</u>
Variable			
Conformity	211.67	132.32	8201.50 $p < .001.$
Self-direction	140.75	212.81	8833.50 $p < .001.$

*Parenting Practices and Parent-Child Relationship**Intercorrelations among Physical and Social Environment Measures and Parenting Practices and Parent-Child Relationship*

As indicated in Table 8, 5 correlations out of 12 were significant ($p < .01$) for each of the SES samples. Most significant correlations are between the HOME cognitive stimulation composite scale score and the physical and social environment measures.

Parenting Practices and Parent-Child Relationship by SES/Community

I examined children's HOME and family environment using a 2 x 2 (Location x Gender) MANOVA with two HOME environment scales and one parent-child interaction scale as dependant variables (refer to Table 9). I entered Age as a covariate. I found significant main multivariate effects of age, $F(3, 302) = 13.375, p < .001$, location, $F(3, 302) = 211.074, p < .001$, and gender $F(3, 302) = 9.675, p < .001$. There were no interaction effects between gender and location. For the age effect, univariate analysis revealed that younger children are provided more cognitive stimulation ($p < .001$) and more emotional support ($p < .003$) across both environments. An examination of the location effect demonstrated that San Cristobal parents provide a more stimulating ($p < .001$) and emotionally supportive ($p < .001$) HOME environment for their children than do Campos parents. Furthermore, follow up univariate analysis demonstrated that the quality of children's HOME and family environment also differed according to gender. The HOME environment of female children is reportedly significantly more emotionally supportive ($p < .001$).

Table 8

Intercorrelations of Physical and Social Environment Measures with Parenting Practices and Parent-Child Relationship

	Income		House-Material Quality scale		Neighbourhood scale		Educational Opportunities scale	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. HOME-Cognitive Stimulation Composite Scale	.302**	.561***	.458***	.681***	.071	.290***	.382***	.482***
2. HOME-Emotional Support Composite Scale	.155*	.095	.300***	.035	.162*	-.015	.371***	.190*
3. PSI- Parent-Child Dysfunctional Interactions	-.121	-.083	-.161*	-.227**	-.054	-.010	-.023	.153

Campos (n = 127) and San Cristobal (n = 119)

* p < .05; ** p < .01; *** p < .001.

Table 9

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for the Quality of the HOME/ Family Environment of 3- 8 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA F		
	<u>M (boys)</u>	<u>M (girls)</u>	<u>M Campos</u>	<u>M San Cristobal</u>	Gender (G) (1, 304)	Location (L) (1, 304)	G x L (1, 304)
Home/Family Environment							
Cognitive Stimulation Composite scale	-.008 (1.03)	.006 (.97)	-.67 (.44)	.92 (.80)	5.21*	618.34***	1.83
Emotional Support Composite scale	-.23 (1.02)	.21 (.94)	-.42 (.89)	.58 (.85)	12.57***	106.60***	.221
PSI- Parent-Child Difficult Interactions scale	.09 (.02)	.09 (.02)	.09 (.02)	.08 (.03)	.003	2.5	2.5

Note. Means are presented in zscores. The SDs appear in parentheses after the means.

*** p < .001.

Differences in Child Development by SES/Community

In order to verify my third hypothesis that child outcome measures differ in both SES/communities, I calculated a Pearson correlation between the measures of the physical and social environment and these variables by location. I determined whether these outcome variables differ significantly by SES environments by means of a MANOVA computed on all these groups of variables, also by SES/community.

Child Development Outcomes

Intercorrelations among Physical and Social Environment Measures and Child Outcome Variables

Tables of intercorrelations between the predictor variables and outcome variables appear in Tables 10 and 11. In the San Cristobal sample, developmental scale scores were not correlated with the physical and social environment measures. Inversely, in the Campos sample, some developmental scales were significantly correlated with the educational opportunities scale as well as the House-Material Quality scale (refer to Table 10). As presented in Table 11, only 4 and 5 of the 52 intercorrelations were significant for the Campos and San Cristobal samples, respectively.

Child Development by SES/Community

Tables 12 through 16 are summaries of the MANOVAs conducted to compare the Campos and San Cristobal children in terms of child outcome. It is important to remember that different measures were used with participants of different ages, as indicated in the titles of the tables.

Table 10

Intercorrelations of Physical and Social Environment Measures with Child Development Variables (CDI)

	Income		House-Material Quality scale		Neighbourhood scale		Educational Opportunities scale	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Social	.003	-.038	-.131	-.098	.016	-.007	.145	-.164
2. Self-Help	-.035	-.137	.016	-.164	-.028	-.041	.094	-.102
3. Gross Motor	-.076	-.118	.378***	-.163	.055	-.111	-.416**	-.292*
4. Fine Motor	-.109	.000	.432***	-.141	.022	-.150	.408**	-.174
5. Expressive Language	-.038	-.101	.097	-.148	.140	-.031	.215	-.162
6. Language Comprehension	-.015	-.064	.169	-.006	.095	-.217	.351**	-.213
7. Letters	-.018	.015	-.092	.202	.073	.088	.360**	.309*
8. Numbers	-.020	-.002	-.175*	-.076	.119	.002	-.353**	.110
9. Global Development	-.050	-.015	.327***	-.112	.003	.095	.479***	-.168

Campos (n = 54) and San Cristobal (n = 50)

* p < .05; ** p < .01; *** p < .00

Table 11

Intercorrelations of Physical and Social Environment Measures with Children's Socioemotional Adjustment, Prosocial Behaviors, Peer Nominations, Sociometric Choice Nominations, Self-Perception, and Academic Achievement Variables

Variables	Income		House-Material Quality scale		Neighbourhood scale		Educational Opportunities scale	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. SDQ-Prosocial-Parent	.091	-.081	.097	-.037	.023	-.070	.131	-.017
2. SDQ-Prosocial-Teacher	-.185	.067	.166	.011	-.244*	-.214**	.120	-.031
3. SDQ-Difficulties-Parent	-.096	.132	-.281***	.196**	-.057	.012	-.114	.277***
4. SDQ-Difficulties-Teacher	.006	-.105	-.040	-.038	-.020	-.020	-.124	-.031
5. PSI-Difficult Child	-.021	.047	-.120	-.125	-.028	.017	-.090	.187*
6. Social & Personal	.313**	-.073	.240	-.212	.038	-.106	.232	-.258*
7. School & Athletic	-.021	.133	-.005	.120	-.356**	.265*	.046	.284*
8. Positive Nominations	.217	.097	.190	-.011	.150	.073	.229	.015
9. Negative Nominations	.203	.110	.079	.069	.000	.163	.206	.007
10. Aggression	.288*	-.076	.125	-.035	.100	.085	.027	-.041
11. Prosocial	.214	.211*	.320*	.170	.115	.190*	.279	.009
12. Social Isolation	.077	.016	.243	-.066	.107	.128	.015	.070
13. Academic Achievement	.306**	.273**	.249*	.349***	-.032	.155*	.157	.273***

Campos (n = 103) and San Cristobal (n = 110) * p < .05; ** p < .01; *** p < .001

As I presented in Table 12, I compared children's development (CDI) across both SES/communities. Although I found a significant multivariate effect for location: $F(9, 131) = 3.985, p < .001$, I did not find any significant effects for gender, age (as a covariate), or for the interaction of location and gender. Follow-up univariate tests revealed that the Campos children were weaker than their San Cristobal counterparts in numbers, letters ($p < .001$), and global development ($p < .002$).

Parents and teachers also evaluated children's socioemotional adjustment (refer to Table 13). I found significant multivariate main effects of age, $F(5, 217) = 4.143, p < .001$, and location $F(5, 217) = 13.365, p < .001$. Pertaining to the age effect, San Cristobal parents reported significantly more prosocial behaviours in older children ($p < .007$). Also, younger children were perceived by their teachers as displaying more problematic behaviours ($p < .002$). Gender effects revealed that teachers endorsed more behaviours indicative of socioemotional problems for male students ($p < .001$). Follow-up univariate tests for the location effect demonstrated that San Cristobal parents ($p < .001$) and teachers ($p < .006$) reported more prosocial behaviours for their children relative to Campos parents and teachers.

I also computed a multivariate analysis with children's mathematics, social sciences, natural sciences, reading/ writing school grades, and overall academic achievement as dependent variables. I found a multivariate main effect for location: $F(5, 253) = 24.889, p < .001$ but no significant effects for gender or age, or for the interaction of location and gender. As shown in Table 14, my follow-up univariate tests revealed that the Campos children were weaker than their

Table 12

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Development (CDI) of 3 and 6 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA F		
	M (boys)	M (girls)	M Campos	M San Cristobal	Gender (G) (1, 136)	Location (L) (1, 136)	G x L (1, 136)
Child Development							
CDI-Social	.034 (.91)	-.14 (1.05)	-.14 (.98)	.19 (.97)	.224	3.856	.001
CDI- Self-Help *	.26 (.22)	.22 (.20)	.23 (.20)	.28 (.24)	.770	1.337	1.21
CDI-Gross Motor *	.29 (.17)	.34 (.16)	.31 (.15)	.31 (.20)	3.745	.019	.92
CDI- Fine Motor	-.008(1.00)	.089 (.83)	.026 (.98)	.068 (.74)	1.167	.011	.78
CDI-Expressive Language *	.34 (.18)	.29 (.16)	.33(.16)	.30 (.21)	1.872	.691	1.55
CDI- Language Comprehension *	.33 (.19)	.30 (.16)	.32 (.17)	.31 (.19)	.249	.003	.92
CDI-Letters	-.023 (1.12)	0.34 (.72)	-.038 (.80)	.114 (1.27)	.947	.405 ***	.22
CDI-Numbers *	1.48 (.37)	1.44 (.32)	1.53 (.34)	1.30 (.32)	.413	14.652***	.02
CDI-Global Development *	1.47 (.34)	1.46 (.29)	1.51 (.31)	1.32 (.30)	.000	10.227**	.99

Note. Means are presented in zscores. The SDs appear in parentheses after the means.

Also, the variables indicated by an asterix have been reflected. As such the direction of these variables needs to be reversed for interpretation.

** $p < .01$ *** $p < .001$.

Table 13

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Behavioral Adjustment of 3-8 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA <u>F</u>		
	<u>M (boys)</u>	<u>M (girls)</u>	<u>M Campos</u>	<u>M San Cristobal</u>	Gender (G) (1, 221)	Location (L) (1, 221)	G x L (1, 221)
Behavioral Adjustment							
SDQ-Parent Problem scale	3.22 (.82)	3.08 (.86)	3.07 (.76)	3.20 (.89)	2.20	1.451	.21
SDQ-Parent Prosocial scale *	1.86 (.53)	1.73 (.50)	2.08 (.46)	1.62 (.47)	.88	51.27***	.09
SDQ-Teacher Problem scale	2.97 (1.11)	2.37 (1.25)	2.93 (1.12)	2.47 (1.25)	11.48***	3.89*	.48
SDQ-Teacher Prosocial scale	6.29 (2.12)	7.08 (2.27)	6.08 (2.21)	7.12 (2.17)	3.66	7.76**	3.26
PSI-SF- Difficult Child scale	4.86 (.77)	4.76 (.75)	4.79 (.70)	4.81 (.79)	.88	.217	.10

Note. The SDs appear in parentheses after the means.

Also, the variable indicated by an asterix has been reflected. As such the direction of this variable needs to be reversed for interpretation

* p < .05; ** p < .01; *** p < .001.

Table 14

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Academic Achievement (Grades) of 6 and 8 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA <u>F</u>		
	<u>M (boys)</u>	<u>M (girls)</u>	<u>M Campos</u>	<u>M San Cristobal</u>	Gender (G) (1, 257)	Location (L) (1, 257)	G x L (1, 257)
Academic Achievement							
Mathematics	75.76 (13.44)	77.61(11.74)	68.11 (11.21)	80.87 (10.93)	.638	25.357***	.742
Social Sciences	75.05 (13.42)	77.71(11.64)	66.73 (10.87)	81.14 (10.37)	.335	25.139***	.751
Natural Sciences	75.48 (13.42)	77.78(11.31)	67.37 (10.92)	81.18 (10.27)	.262	25.182***	.615
Reading/ Writing	75.17 (13.76)	77.94(12.33)	66.98 (11.69)	81.30 (10.94)	.350	22.895***	1.108
Overall Academic Achievement *	5.30 (1.28)	5.12(1.11)	6.13 (.83)	4.76 (1.07)	.310	93.896***	.549

Note. The SDs appear in parentheses after the means.
Also, the variable indicated by an asterix has been reflected. As such, the direction of this variable needs to be reversed for interpretation.

*** p < .001.

San Cristobal counterparts in all academic subjects and in overall academic achievement ($p < .001$).

In order to assess whether children's social peer interactions are associated with the characteristics of their SES/community, I computed a MANOVA with two peer-nomination categories and three peer assessment scales as dependent variables. I found a multivariate main effect for gender $F(5, 205) = 6.859, p < .001$ but no significant multivariate effects for location, age, or for the interaction between location and gender. Pertaining to the gender effect, as presented in Table 15, univariate analysis revealed that boys received significantly more nominations for being liked the least ($p < .005$). Boys were also more frequently chosen as most aggressive ($p < .001$) and as more socially isolated ($p < .002$).

Lastly, I administered a self-perception measure to eight year-old children in order to determine if there is a link between children's view of self and their SES/community. I found a significant multivariate effect for location: $F(2, 127) = 8.960, p < .001$. However, I did not find any significant effects for gender or for the interaction of location and gender. As presented in Table 16, the location effect demonstrated that San Cristobal children reported a more positive view of their social interactions and abilities as well as more satisfaction with their life ($p < .001$) than the less affluent Campos children. On the other hand, perception of athletic and academic competence did not significantly differ as a function of SES/community.

Overall, the results indicated that SES was associated with a very distinct daily physical and social context for both mothers and their offspring. This physical and social environment was also related to mothers' parenting stress, psychological adjustment, social support network,

Table 15

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Peer Nominations and Sociometric Choice Nominations of 6 and 8 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA <u>F</u>		
	<u>M (boys)</u>	<u>M (girls)</u>	<u>M Campos</u>	<u>M San Cristobal</u>	Gender (G) (1, 209)	Location (L) (1, 209)	G x L (1, 209)
Nominations							
Nominations for Like Most	.05 (1.03)	.01 (1.02)	-.07 (.88)	.06 (1.06)	.224	.621	.149
Nominations for Like Least	.33 (1.08)	-.19 (.88)	.015 (.97)	.005 (1.00)	7.95**	.208	1.52
Aggression	.52 (1.32)	-.33 (.58)	.00 (.93)	-.01 (1.05)	26.18***	.664	2.04
Prosocial Behavior	.32 (1.28)	-.16 (.80)	.00 (.86)	.03 (1.08)	6.84**	.390	.585
Social Isolation	.35 (1.06)	-.25 (.75)	.00 (.86)	-.03 (.95)	10.26**	.323	4.54*

Note. The SDs appear in parentheses after the means.

** p < .01; *** p < .001.

Table 16

Means, Standard Deviations, and Analysis of Variance (ANOVA) Results for Child Self-Perception of 8 year-olds as a Function of Gender and SES/Community

	Gender		Location		ANOVA F		
	<u>M (boys)</u>	<u>M (girls)</u>	<u>M Campos</u>	<u>M San Cristobal</u>	Gender (G) (1, 128)	Location (L) (1, 128)	G x L (1, 128)
Self-Perception							
Social and Personal Self- Perception *	2.81 (1.01)	2.75 (5.95)	3.11 (1.08)	2.50 (.87)	.357	12.326***	.088
School and Athletic Self- Perception	43.88 (4.99)	43.73 (5.65)	43.87 (4.51)	43.72 (6.04)	.016	.024	.051

Note. The SDs appear in parentheses after the means.

Also, the variable indicated by an asterix has been reflected. As such the direction of this variable needs to be reversed for interpretation

*** p < .001.

parenting values, quality of HOME environment, and several dimensions of children's development and emotional and behavioural adjustment. In the following section, I will examine how divergent parenting values are related to parenting practices.

Relationship between Parenting Values and the Quality of the HOME and Family Environment

Intercorrelations between Parenting Values and the HOME and Family Environment Variables

As I detailed in Table 6, I observed an association between maternal parenting values and the quality of the HOME environment. For instance, the value of conformity by both high and low SES mothers was significantly associated with the provision of a less emotionally supportive HOME environment ($p < .006$).

Regression Analyses Predicting HOME and Family Characteristics with Maternal Parenting Values

In order to determine the contribution of maternal parenting values to their parenting practices, as stated in my fourth hypothesis, I computed hierarchical multiple regression analyses. To avoid multicollinearity problems, due to the strong association between SES/community and HOME scales, I ran analyses separately for each SES group.

Table 17 details the hierarchical regression model predicting cognitive stimulation in low and higher SES homes. In this regression model, I entered gender in the first block followed by conformity in the second block. These variables did not explain any significant amount of variance for both SES samples. They also did not explain any significant amount of variance for the regression model predicting perception of the parent-child relationship in both SES samples.

Table 17

Summary of Multiple Regression Analysis for HOME and Family Variables at ages 3, 6, and 8 years with Maternal Parenting Values

Step and predictor Variable	<u>β Values Using Cognitive Stimulation Composite Scale</u>		<u>β Values Using Emotional Support Composite Scale</u>		<u>β Values Using Parent-Child Difficult Interaction</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Gender	-.061	-.143	.220**	.198*	.115	-.081
Multiple R ²	.004	.020	.048	.039	.013	.007
R ² Change	.004	.020	.048	.039	.013	.007
F Change	.676	2.928	9.269**	5.723*	2.391	.960
2. Conformity Score	-.061	-.066	-.082	-.221**	.170*	-.164*
Multiple R ² (cum)	.007	.025	.055	.088	.042	.033
R ² Change	.004	.004	.007	.049	.029	.027
F Change	.683	.619	1.284	7.436**	5.299*	4.003*

* $p < .05$; ** $p < .01$; *** $p < .001$.

However, in the regression models to predict the provision of emotional support in the HOME setting, gender significantly predicted the quality of emotional support in the Campos home explaining .05 unique variance (sr^2). In turn, a preference for self-direction significantly predicted the provision of emotional support in San Cristobal homes ($sr^2 = .05$). More emotional support is provided to Campos female children and by San Cristobal mothers who value self-direction.

It appears that mother's provision of emotional support is influenced by gender roles in the Campos and the value of self-direction in San Cristobal. In the following section I will test my fifth hypothesis stipulating that both maternal characteristics and quality of HOME and family functioning are associated with children's development and emotional adjustment.

Contribution of Maternal Characteristics, HOME Environment, and Parent-Child

Relationship to Child Development

Intercorrelations between Predictor Variables and Outcome Variables

Tables of the intercorrelations of the predictor variables and intercorrelations of the outcome variables appear in Tables 18 to 20. As presented in Table 18, 13 of the 21 intercorrelations between the predictor variables are significant ($p < .01$). In addition, all CDI scales are significantly and positively intercorrelated for the Campos and San Cristobal children with the exception of the Letters subscale (refer to Table 19). As I indicated in Table 20, similar associations among child outcome variables emerged across SES samples. Thirty-eight of the 169 intercorrelations were significant with most intercorrelations occurring with the peer and sociometric choice nomination scores.

Table 18

Intercorrelations of SES/Community and Predictor Variables (Maternal Support, Parenting Stress, Psychological Adjustment, HOME scales, and Parent-Child Relationship)

	1	2	3	4	5	6	7
1. Location (Campos versus San Cristobal)	---						
2. Parenting Stress (PSI-PS)	.330***	---					
3. Social Support (ISEL)	-.221***	-.395***	---				
4. Psychological Adjustment (BSI-GSI)	-.075	.412***	-.363***	---			
5. Cognitive Stimulation Composite Scale	.773***	.039	.027	-.251***	---		
6. Emotional Support Composite Scale	.497***	-.025	.070	-.236***	.600***	---	
7. Parent- Child Interaction (PSI-PC)	.159**	.257***	-.104	.155**	.013	.105	---

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 19

Intercorrelations among Child Development Inventory (CDI) subscales

Measure	1	2	3	4	5	6	7	8	9
1. Social Development	---	.295***	.565***	.448***	.535***	.531***	.363***	-.404***	.569***
2. Self-Help Skills	.382***	---	.248**	.195*	.493***	.516***	.261**	-.076	.384***
3. Gross Motor Skills	.321**	.373**	---	.684***	.513***	.537***	.337***	-.348***	.701***
4. Fine Motor Skills	.169	.450***	.436***	---	.510***	.523***	.339***	-.404***	.829***
5. Expressive Language	.385***	.529***	.491***	.477***	---	.768***	.482***	-.426***	.714***
6. Language Comprehension	.438***	.544***	.474***	.565***	.620***	---	.425***	-.392***	.741***
7. Numbers	.067	.084	.143	.326**	.089	.096	---	-.535***	.593***
8. Letters	-.112	-.081	-.163	.208	.053	.075	.496***	---	-.673***
9. General Development	.362**	.595***	.487***	.824***	.672***	.715***	.208	.187	---

Note. Intercorrelations for the Campos participants (n = 54) are presented above the diagonal, and intercorrelations for San Cristobal (n = 45) participants are presented below the diagonal.

* p < .05; ** p < .01; *** p < .001.

Table 20

Intercorrelations among Child Social Emotional Adjustment, Prosocial Behaviour, Self-Perception, Peer Nominations, Sociometric Choice Nominations, and Academic Achievement

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. SDQ-parent Prosocial	---	.01	-.33***	-.09	-.09	.14*	.04	.02	-.05	-.06	-.20	-.12	-.14
2. SDQ-teacher Prosocial	.09	---	-.19	-.36***	-.18	-.03	.13	.07	-.06	-.21	.01	.03	.31**
3. SDQ-parent Difficulties	-.22**	-.05	---	0	.34***	-.36**	-.08	.10	.11	.01	-.09	-.18	.04
4. SDQ-teacher Difficulties	-.02	-.50***	.39***	---	.10	-.07	-.14	-.29*	.03	.24	-.09	-.02	-.35***
5. PSI-Difficult Child Scale	-.15	-.08	.32***	.12	---	-.03	-.04	-.02	-.08	-.17	-.12	-.27	.04
6. Social & Personal	-.10	-.01	-.16	-.03	-.17	---	.46***	-.15	-.21	.05	-.12	-.34	.19
7. School & Athletic	.02	-.29*	-.05	-.01	-.05	.62***	---	.02	-.20	.22	.19	.33	-.08

Table 20 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13
8. Positive Nominations	.06	.29***	-.02	-.27***	0	-.03	-.09	---	.21	.38**	.55***	.40**	.41**
9. Negative Nominations	.02	0	.31***	.40***	.08	-.26*	-.25*	.05	---	.14	.37**	.30*	.06
10. Aggression	.02	-.08	.34***	.46***	.18*	-.08	-.20	.12	.62***	---	.36**	.34**	.09
11. Prosocial	.02	.13	.02	-.08	.10	.02	.02	.52***	.16*	.23**	---	.59***	.18
12. Social Isolation	.24**	-.14	.24**	.32***	-.01	-.14	.11	-.01	.27***	.31***	.05	---	.06
13. Academic Achievement	.04	.09	-.32***	-.39***	-.08	.18	-.17	.21**	-.13	-.17*	.16*	-.21**	---

Note. Intercorrelations for the Campos participants (n = 103) are presented above the diagonal, and intercorrelations for San Cristobal participants (n = 110) are presented below the diagonal.

* p < .05; ** p < .01; *** p < .001.

Regression Analyses Predicting Child Outcome Variables

Tables 21 to 27 are a summary of the multiple hierarchical regression analyses predicting child development outcomes from the maternal adjustment variables and the quality of the HOME environment and parent-child relationship. I first entered age and gender into these regression analyses, followed by maternal parenting stress, social support network, and psychological adjustment entered as a second block. I then entered, as my third and final entries, the cognitive stimulation and emotional support HOME variables and the parent-child interaction family variable. I based the order of entry on a conceptualization that child characteristics (age and gender) were proximal control variables. I entered the HOME and family variables later in the model to examine the variance explained by these measures when maternal stress, social support, and psychological adjustment had been considered. I conducted the analyses for children's social, self-help, gross motor, fine motor, expressive language, language comprehension, numbers, letters, and general development separately. I also computed separate analyses on children's emotional difficulties and prosocial skills as assessed by both parents and teachers, mothers' perception of child as difficult, positive and negative peer nominations, peer assessment for aggressive, prosocial, and socially isolated, as well as children's social and personal self-perception, school and athletic self-perception, and their academic achievement.

Regression analyses predicting child development (CDI). As shown in Tables 21 to 23, age was not a significant predictor of children's development across both samples. The next block pertained to parental stress, social support, and psychological adjustment. The maternal variables also did not explain a significant portion of the variance. Nonetheless, maternal support

Table 21

Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using Social Development</u>		<u>β Values Using Self-Help Skills</u>		<u>β Values Using Gross Motor Skills</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Age	-.112	.282*	-.193*	.322*	-.059	.179
Gender	-.041	.007	-.102	.004	.006	.037
Multiple R ²	.014	.080	.046	.103	.003	.034
R ² Change	.014	.080	.046	.103	.003	.034
F Change	.824	2.213	2.847	2.943	.207	.908
2. Maternal Distress (PSI- PS)	-.007	-.109	-.032	-.122	-.069	-.184
Maternal Support (ISEL- Total scale)	.022	.154	.031	-.074	.162	-.030
Maternal Adjustment (BSI-GSI)	-.070	-.226	-.032	-.143	-.219*	-.010
Multiple R ² (cum)	.021	.134	.049	.163	.058	.069
R ² Change	.007	.054	.002	.060	.055	.035
F Change	.268	.994	.092	1.145	2.228	.600
3. Cognitive Stimulation Composite scale	.459***	.020	.377**	.154	.518***	.115
Emotional Support Composite scale	.225*	.548***	-.371***	.398*	.141	.496**
Parent-Child Dysfunctional Interactions (PC-PSI)	-.168	-.011	-.047	-.030	-.208*	-.119
Multiple R ² (cum)	.186	.373	.165	.281	.288	.242
R ² Change	.165	.239	.117	.118	.230	.172
F Change	7.567***	5.719**	5.173**	2.456	12.072***	3.412*

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 22

Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using Fine Motor Skills</u>		<u>β Values Using Expressive Language</u>		<u>β Values Using Language Comprehension</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Age	-.036	.256	-.049	.074	-.132	.247
Gender	-.029	.092	-.167	.049	-.125	.015
Multiple R ²	.002	.077	.030	.008	.032	.062
R ² Change	.002	.077	.030	.008	.032	.062
F Change	.122	2.135	1.785	.214	1.921	1.672
2. Maternal Distress (PSI- PS)	-.226*	-.206	.101	-.196	-.012	-.217
Maternal Support (ISEL- Total scale)	.122	-.067	.067	.016	.024	-.120
Maternal Adjustment (BSI-GSI)	-.139	-.054	-.150	-.055	-.178	-.091
Multiple R ² (cum)	.076	.127	.056	.056	.068	.112
R ² Change	.074	.049	.027	.048	.036	.050
F Change	3.031*	.907	1.079	.814	1.482	.904
3. Cognitive Stimulation Composite scale	.287*	.059	.271*	.034	.352**	.011
Emotional Support Composite scale	.038	.162	.161	.277	.257*	.375*
Parent-Child Dysfunctional Interactions (PC-PSI)	-.269**	-.076	-.139	-.070	-.205*	-.058
Multiple R ² (cum)	.218	.161	.126	.121	.200	.220
R ² Change	.142	.034	.069	.065	.132	.109
F Change	6.727***	.611	2.941*	1.104	6.096***	2.092

* p < .05; ** p < .01; *** p < .001.

Table 23

Summary of Multiple Regression Analysis for Variables Predicting Child Development (CDI) at Ages 3 and 6 years with Maternal and HOME/Family Variables

Step and predictor variable	<u>β Values Using Numbers</u>		<u>β Values Using Letters</u>		<u>β Values Using General Development</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Age	.145	-.099	-.095	.009	-.028	.173
Gender	-.037	-.057	.140	.001	-.071	.097
Multiple R ²	.023	.012	.030	.000	.006	.042
R ² Change	.023	.012	.030	.000	.006	.042
F Change	1.361	.315	1.786	.002	.335	1.113
2. Maternal Distress (PSI- PS)	-.037	.092	-.091	.076	-.056	-.212
Maternal Support (ISEL- Total scale)	.142	-.077	-.280**	-.028	.134	-.083
Maternal Adjustment (BSI-GSI)	-.142	.173	-.182	.179	-.229*	-.048
Multiple R ² (cum)	.049	.048	.105	.030	.060	.093
R ² Change	.027	.036	.075	.030	.054	.052
F Change	1.070	.609	3.195*	.492	2.186	.909
3. Cognitive Stimulation Composite scale	.345**	.237	.363***	.028	.490***	.066
Emotional Support Composite scale	.128	-.236	.088	.036	.192	.279
Parent-Child Dysfunctional Interactions (PC-PSI)	-.087	.001	-.165	.103	-.269**	-.073
Multiple R ² (cum)	.133	.109	.228	.039	.299	.159
R ² Change	.084	.060	.123	.009	.239	.065
F Change	3.579*	1.013	5.879***	.141	12.644***	1.165

* $p < .05$; ** $p < .01$; *** $p < .001$.

was predictive ($p < .006$) of better letter skills in Campos children ($sr^2 = .06$), even though the maternal variables as a whole did not explain a significant portion of the variance in the acquisition of this skill. I then entered hierarchically quality of the HOME environment and parent-child relationship. All the variables I entered in this block emerged as significant predictors above and beyond the prediction from the variables entered previously. The cognitive stimulation variable significantly ($p < .004$) predicted Campos children's success on all developmental scales with the exception of the expressive language and motor skills scales. Inversely, the quality of the cognitive stimulation afforded to more affluent San Cristobal children did not predict their performance on any of the developmental dimensions. These more affluent children's development was best explained by the quality of the emotional support afforded in the HOME environment which significantly predicted their social development and gross motor skills ($p < .003$). The quality of emotional support afforded in the HOME setting also significantly predicted Campos children's self-help abilities. Furthermore, quality of the parent-child relationship predicted the development of fine motor skills and general development in Campos children ($p < .003$).

In the lower-SES sample, the quality of the cognitive stimulation offered to the children uniquely contributed to the prediction of these children's performance on most of the developmental scales. Unique predictions (sr^2) of .12, .08, .15, .07, .07, .08, and .14 were obtained for the social, self-help, gross motor, language comprehension, numbers, letters, and general development, respectively. The emotional support composite scale for Campos children made a unique contribution to self-help abilities ($sr^2 = .09$). The quality of emotional support

provided by San Cristobal mothers explained .21 and .17 unique variance (sr^2), on the social development and gross motor scales, respectively. Fine motor as well as overall general development of Campos children were also predicted by the quality of the parent-child relationship with unique predictions (sr^2) of .07 and .07. Parents' perception of their parent-child interaction was not predictive of San Cristobal children's development.

Overall, a more stimulating and supportive HOME environment in which the parent and child benefit from a harmonious relationship was associated with better child development among Campos children, with the exception of self-help skills that appeared to be more easily acquired in a less emotionally supportive family environment. On the other hand, an emotionally supportive HOME environment best explained San Cristobal children's development.

Regression analyses predicting child socioemotional adjustment. In Table 24, I present the regression models predicting parents' and teachers' ratings of emotional and behavioural difficulties and mothers' rating of their child on the Difficult Child scale. Both age ($sr^2 = .06$) and gender ($sr^2 = .03$) were significant ($p < .002$) predictors of San Cristobal teachers' reports of socioemotional problems in their students. However, these control variables did not predict both SES mothers' rating of their child's socioemotional adjustment or the view of their child. The maternal variables I entered in the second block explained a significant amount of variance in caregivers' rating of adjustment difficulties in their children and San Cristobal mothers' perception of their child as difficult. Maternal parenting stress explained .06 unique variance (sr^2) in Campos children's emotional difficulties and made a unique contribution of .02 to San Cristobal mothers' appraisal of their child as difficult. I then entered hierarchically quality of the

Table 24

Summary of Multiple Regression Analysis for Variables Predicting Child Emotional Adjustment (SDQ and PSI-SF) at Ages 3, 6, and 8 years with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using- Total Difficulties SDQ- Parent Version</u>		<u>β Values Using- Total Difficulties SDQ- Teacher Version</u>		<u>β Values Using- Difficult Child Scale (PSI)</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Age	-.179*	-.062	.150	.268**	-.040	-.032
Gender	-.146*	-.086	-.193	-.289***	-.061	-.047
Multiple R ²	.051	.010	.065	.145	.005	.004
R ² Change	.051	.010	.065	.145	.005	.004
F Change	4.780**	.614	2.873	9.769***	.456	.230
2. Maternal Distress (PSI- PS)	.379***	.197*	-.039	.015	.140	.269**
Maternal Support (ISEL- Total Scale)	-.001		.075	-.170	-.014	.033
Maternal Adjustment (BSI-GSI)	.151*	.231*	-.111	.049	.068	.116
Multiple R ² (cum)	.265	.215	.084	.185	.035	.109
R ² Change	.214	.205	.019	.040	.030	.106
F Change	16.867***	10.731***	.540	1.839	1.800	4.857**
3. Cognitive Stimulation Composite scale	-.200**	-.037	.135	-.061	-.095	-.009
Emotional Support Composite scale	-.125	-.167	-.427***	-.266**	-.027	-.080
Parent-Child Dysfunctional Interactions (PC-PSI)	.134*	.106	.045	.064	.463***	.613***
Multiple R ² (cum)	.352	.259	.217	.267	.257	.478
R ² Change	.087	.043	.133	.082	.222	.369
F Change	7.639***	2.346	4.292**	4.050**	17.050***	28.284***

* p < .05; ** p < .01; *** p < .001.

HOME environment and parent-child relationship as the third block. The presence of emotional difficulties in Campos children, as assessed by the maternal figure, was best explained by the quality of cognitive stimulation ($sr^2 = .03$). On the other hand, the quality of emotional support provided in the HOME environment best explained teachers' reports of emotional difficulties. Emotional support made a unique contribution (sr^2) of .13 to the Campos sample and of .06 to the San Cristobal group. Among the HOME and family variables, the quality of the parent-child relationship was the best predictor of maternal perception of the child as difficult, accounting for .20 and .35 unique variance (sr^2) in the Campos and San Cristobal samples, respectively.

Parenting stress and a less cognitively stimulating HOME environment were predictive of more socioemotional difficulties in Campos children. Being younger and male were most predictive of a less favourable behavioural assessment of children by San Cristobal teachers, whereas an emotionally supportive home environment was predictive of teachers' reports of less emotional difficulties in children belonging to both SES contexts. Furthermore, a more negative appraisal of the parent-child relationship was predictive of maternal perception of their child as more difficult by both Campos and San Cristobal mothers. San Cristobal mothers' parenting stress was also predictive of a more negative view of their child.

Regression analyses predicting child prosocial behaviour. I presented in Table 25 both mother and teacher hierarchical regression models predicting children's prosocial behaviours. In the first block, age significantly predicted Campos mothers' ratings of their children's prosocial behaviours which accounted for .14 unique variance (sr^2). The second block comprised of maternal variables did not explain any significant variance. The last block made up of HOME

Table 25

Summary of Multiple Regression Analysis for Variables Predicting Child Prosocial Behaviour (SDQ) at Ages 3, 6, and 8 years with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using Prosocial Behaviour SDQ- Parent Version</u>		<u>β Values Using Prosocial Behaviour- SDQ- Teacher Version</u>	
	Campos	San Cristobal	Campos	San Cristobal
1. Age	-.318***	-.204*	.114	-.299***
Gender	-.156*	-.153	-.030	.228**
Multiple R ²	.121	.074	.013	.132
R ² Change	.121	.074	.013	.132
F Change	12.228***	5.046**	.551	8.769***
2. Maternal Distress (PSI- PS)	.091	-.044	.227	-.091
Maternal Support (ISEL- Total scale)	.007	.210*	.094	.020
Maternal Adjustment (BSI-GSI)	-.155	-.171	.058	.152
Multiple R ² (cum)	.142	.191	.052	.149
R ² Change	.021	.117	.038	.016
F Change	1.390	5.912***	1.068	.721
3. Cognitive Stimulation Composite scale	.183*	-.275**	-.073	.151
Emotional Support Composite scale	.142	.254**	.205	.068
Parent-Child Dysfunctional Interactions (PC-PSI)	-.040	-.116	-.105	-.151
Multiple R ² (cum)	.206	.280	.094	.182
R ² Change	.064	.089	.043	.033
F Change	4.625**	4.969**	1.193	1.479

* $p < .05$; ** $p < .01$; *** $p < .001$.

and family variables was a significant predictor of parental assessment of prosocial behaviours in their offspring in both SES/communities even though none of the individual variables in the Campos model reached a significance at the .007 alpha level. In turn, San Cristobal children's prosocial behaviours were best accounted for by the presence of an emotionally supportive HOME environment and less emphasis on the provision of cognitive stimulation each explaining .04 unique variance (sr^2).

The hierarchical regression model predicting prosocial behaviours, as assessed by Campos teachers, was not significant. None of the variable blocks or individual variables explained a significant amount of variance in Campos children's prosocial behaviours in the school setting. The San Cristobal teacher model was significant. San Cristobal teachers' favourable rating on the prosocial scale was best explained by the first block comprised of the age and gender control variables that explained .05 and .07 unique variance (sr^2), respectively. As I presented in Table 25, the other two blocks made up of maternal and HOME and family variables did not contribute any significant variance to the model.

Overall, being younger and belonging to a globally better HOME and family environment were associated with maternal reports of a more prosocial disposition in Campos children. On the other hand, a greater emphasis on the provision of an emotionally supportive HOME environment and less emphasis on cognitive stimulation were predictive of a more prosocial disposition in San Cristobal children. Among San Cristobal students, being female and younger were predictive of teachers' endorsements of more prosocial behaviours.

Regression analyses predicting peer nominations of social behaviour and sociometric choice nominations. Because results from the MANOVA did not reveal any significant variations in children's peer nominations and peer assessment as a function of their SES/community, I conducted the hierarchical regression models for these child outcome variables on the entire sample simultaneously (refer to Table 26). None of the blocks in the models predicting liked most and liked least nominations were significant.

The hierarchical regression model predicting aggressive behaviour, as rated by classmates, was significant. In the first block, gender accounted for .12 unique variance (sr^2), male students being more frequently assessed as most aggressive. None of the variables in the other blocks made up of maternal and HOME and family variables contributed any significant variance to the model. The next regression model predicting prosocial behaviours, as rated by same-classroom peers, was not significant. Lastly, social isolation was best explained by the first block of control variables. Social isolation was predicted by gender ($sr^2 = .03$). Males were rated by their classmates as more socially isolated. The other two blocks made up of maternal and HOME and family variables were not significant. Overall, being male was predictive of nominations as most aggressive and socially isolated.

Regression analyses predicting children's self-perception. I presented in Table 27 the regression models using children's self-perception scales. The hierarchical regression model predicting eight year-old children's social and personal self-perception was significant only for the Campos sample. Although the first two blocks containing the control and maternal variables did not contribute any significant variance to the model, the third one comprised of HOME and

Table 26

Summary of Multiple Regression Analysis for Variables Predicting Peer and Sociometric Choice Nominations at Ages 6 and 8 years with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using- Like Most Nominations</u>	<u>β Values Using- Like Least Nominations</u>	<u>β Values Using- Aggression</u>	<u>β Values Using- Prosocial</u>	<u>β Values Using- Social Isolation</u>
1. Age	-.000	.064	.074	-.010	.033
Gender	-.022	-.195**	-.473***	-.195*	-.300***
Multiple R ²	.000	.041	.182	.038	.090
R ² Change	.000	.041	.182	.038	.090
F Change	.035	3.116*	16.051***	2.871	7.153***
2. Maternal Distress (PSI-PS)	-.163	-.015	.011	.079	-.073
Maternal Support (ISEL- Total)	.190*	-.024	-.024	.163	-.043
Maternal Adjustment (BSI-GSI)	.074	.078	.115	.002	-.029
Multiple R ² (cum)	.038	.047	.193	.058	.094
R ² Change	.038	.006	.011	.020	.004
F Change	1.882	.302	.618	.988	.196
3. Cognitive Stim. Composite scale	.020	-.057	-.029	.187	.003
Emotional Sup. Composite scale	.124	-.124	-.220*	.033	-.023
Parent-Child Dysfunctional Interaction scale	-.038	.058	.100	-.028	.081
Multiple R ² (cum)	.054	.060	.239	.083	.101
R ² Change	.016	.013	.046	.025	.007
F Change	.779	.621	2.792*	1.269	.357

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 27

Summary of Multiple Regression Analysis for Variables Predicting Child Self-Perception and Academic Achievement with Maternal and HOME/Family Variables

Step and predictor Variable	<u>β Values Using- Social & Personal Self-Perception</u> (8 year-olds)		<u>β Values Using- School & Athletic Self-Perception Scale</u> (8 year-olds)		<u>β Values Using- Academic Achievement (6 & 8 year-olds)</u>	
	Campos	San Cristobal	Campos	San Cristobal	Campos	San Cristobal
1. Age	-.184	.026	.265	-.040	-.013	.251**
Gender	.030	-.072	-.014	-.074	-.023	-.019
Multiple R ²	.038	.006	.068	.007	.001	.063
R ² Change	.038	.006	.068	.007	.001	.063
F Change	1.099	.134	1.997	.173	.027	4.013*
2. Maternal Distress (PSI-PS)	-.215	-.092	-.058	.319	-.171	-.007
Maternal Support (ISEL- Total)	-.214	.051	.037	-.220	.095	-.164
Maternal Adjustment (BSI-GSI)	-.047	-.169	-.024	.016	-.101	-.123
Multiple R ² (cum)	.102	.020	.077	.073	.081	.123
R ² Change	.063	.015	.009	.066	.080	.060
F Change	1.220	.220	.168	1.038	2.328	2.681*
3. Cognitive Stim. Composite scale	.001	-.391	.020	-.274	.039	.215*
Emotional Sup. Composite scale	.471**	-.116	.247	-.011	.210	.136
Parent-Child Dysfunctional Interaction scale	-.224	-.048	-.320*	.019	-.135	.082
Multiple R ² (cum)	.308	.092	.200	.112	.137	.191
R ² Change	.207	.072	.123	.039	.057	.068
F Change	4.876**	1.084	2.512	.596	1.684	3.183*

* $p < .05$; ** $p < .01$; *** $p < .001$.

family variables was significant due to the variance accounted for by the emotional support variable ($sr^2 = .16$). A positive view of self and one's life was best explained by the presence of an emotionally supportive HOME environment ($p < .002$). In the San Cristobal model, none of the blocks explained a significant portion of variance. Furthermore, none of the blocks of variables I entered hierarchically to predict both Campos and San Cristobal children's school and athletic self-perception contributed any significant variance. Overall, in the Campos sample, the presence of an emotionally supportive HOME environment was associated with a more positive social and personal self-perception.

Regression analysis predicting academic achievement. As shown in Table 27, the hierarchical regression model predicting academic success was significant only for the San Cristobal students. The first block comprised of age and gender as control variables was significant, with age accounting for a significant portion of unique variance ($sr^2 = .02$). The other blocks containing maternal variables and HOME and family variables did not account for a significant portion of variance. Among the San Cristobal children, academic success was best explained by being younger.

DISCUSSION

The Physical and Social Context of Poverty in the Dominican Republic

Pertaining to my first hypothesis predicting that Campos children would belong to a very different physical and social context compared to that of higher-SES San Cristobal children, analyses revealed that the Campos and San Cristobal environments did indeed differ significantly at all systems levels (proximal and distal). As I predicted, San Cristobal children benefit overall

from a better developmental context. They reside in homes built of better materials and with more facilities such as a toilet, water, electricity, and space, as well as more electronic apparatuses to assist mothers in their daily household chores. Their homes are also located in neighbourhoods with more health and educational institutions and more opportunities to participate in cultural and professional development. Moreover, they are afforded significantly better educational opportunities. San Cristobal children attend better schools with more academic resources and have better-educated parents who can serve as models in their formative experiences. Overall, San Cristobal parents have university-level education or professional training compared to Campos parents, who mostly have primary school education. Also, San Cristobal fathers predominantly have professional employment relative to Campos fathers, who mostly have blue-collar employment. In addition, San Cristobal mothers are mostly externally employed compared to Campos mothers, the majority of whom are housewives. Lastly, Campos mothers are younger, were younger at birth of their first child, and have more children, which invariably leads to more family members residing in a small depleted dwelling. On the whole, these findings support those of the North-American literature depicting the pernicious effects of poverty on children's proximal and distal physical environment (e.g., McLoyd, 1990; Bradley & Corwyn, 2002; Evans, 2004). As observed in most North American literature, (e.g., Hoff-Ginsberg & Tardif, 1995; Duncan, 1991; Leventhal & Brooks-Gunn, 2003) it seems that poverty does not merely signify reduced income but may bring with it a specific lifestyle consistent with the characteristics of the physical and social context of poverty.

*Influence of the Impoverished Dominican Physical and Social Environment on**Maternal Psychology, Parenting Values, and Parenting Practices*

I had anticipated, as indicated in hypothesis 2, that living in these distinct SES/communities would influence maternal psychology and parenting variables. In the following paragraphs, I will review differences in these two dimensions of the developmental niche by SES/community.

Maternal Psychology

Social support. In my Dominican sample, being poor was not associated with the experience of less social support and more parenting stress as is noted in most North-American research (McLoyd, 1990; McLoyd, 1998). In fact, contrary to my expectations, San Cristobal mothers were the ones who reported significantly less social support and more stress in their parenting role. Observational data collected during interviews with Campos mothers may shed some light on this finding. For instance, the homes of Campos mothers are too small to stay indoors to accomplish many of their household tasks. Therefore, most of their daily chores are done in their yard, a space shared by other neighbours. These mothers often group together as they prepare beans for lunch or wash their family's clothing. Going to the river to get water is also done as a group activity, providing them with another opportunity to interact with their neighbours. Indeed, these mothers converse as they walk, which may make this cumbersome daily chore somewhat more pleasant. On the other hand, San Cristobal mothers reside in bigger and more luxurious homes and spend more time indoors. Also, some families have a fence

around their home in order to provide more privacy and protection against potential robberies.

This may also contribute to a greater sense of isolation.

The level of social support reported by both samples of mothers could also be explained by their family structure. For instance, 35% of Campos mothers live in extended families compared to 23% of San Cristobal caregivers. It is possible that this extended family structure provides Campos mothers more opportunities for support. On the other hand, San Cristobal mothers who are employed full-time report a better social support network. This finding is consistent with Crouter and McHale's (1993) report that the interpersonal relationships parents experience in their work setting have a salutary effect.

The association between SES/community and maternal social support is further elucidated by a review of correlational data (refer to Table 4). San Cristobal mothers' endorsement of social support was positively and significantly correlated with all physical and social environment measures, with the exception of the neighbourhood scale. Higher scores on these measures are associated with a more supportive social network. San Cristobal mothers' experience of social support is linked to their higher SES/community and the quality of their physical and social setting, as is also observed in most samples of North American mothers. This similarity may be explained by both sets of parents belonging to a monetarized economy, as evidenced by the greater sense of social support experienced by mothers employed full-time. On the other hand, the absence of an association between the physical and social setting measures and maternal social support among Campos mothers may be attributed to their exclusion from this monetarized world. Instead, they possibly belong to a world in which one's wealth is measured by relationships and

not material objects. It is conceivable that in an environment of survival, interdependence is necessary and, as a result, greater value is placed on social relationships and more time is spent developing them. Nonetheless, it is possible that in spite of mothers' SES/community, the opportunity to work together either informally or through formal employment provides these women with a greater sense of belonging and support.

Another explanation for the endorsement of more social support by Campos mothers may be their strong religious beliefs and active participation in religious practices. As observed, most residents of the agricultural villages attend religious ceremonies or meet to read the Bible. Also, their perception of God as a provider and their willingness to respect his will as evidenced in the frequent saying "Si Dios quiere" [As God wishes] may serve to alleviate their sense of aloneness and subsequently decreases the experience of negative emotions.

Parenting stress. Dominican mothers' experience of distress in their parenting role is also impacted by SES/community, with San Cristobal mothers reporting a higher level of parenting stress. Unlike the experience of social support, Campos mothers' report of parenting stress was positively and significantly associated with the quality of their home and the presence of educational opportunities in their neighbourhood, with better homes and more educational opportunities being associated with a greater endorsement of parenting stress on the PSI-SF. On the other hand, San Cristobal mothers' parenting stress was significantly associated with their scores on all the physical and social environment measures. More specifically, San Cristobal mothers with a more elevated family income, residing in better neighbourhoods in which more educational opportunities are afforded to children, reported the highest level of parenting stress. However, having a more comfortable home was associated with less stress in their parenting role.

The link between the characteristics of the physical and social environment and maternal parenting stress may be explained in terms of expectations. It is plausible that Campos mothers, who reside in more depleted homes and environments, are in a survival mode and thus do not have time to stress themselves with their parenting role as measured by my questionnaires. These lower-SES mothers are possibly consumed with ensuring their family's survival, such that when the basic task of sustenance has been achieved, they perceive their parenting obligations as having been met. Conversely, Campos mothers who reside in somewhat advantageous conditions may have more time and more awareness of complex parenting roles and therefore preoccupy themselves more with the quality of their parenting. As for San Cristobal mothers, their stress may emanate from their understanding of what their children will need to succeed in the competitive monetarized economy, and therefore experience greater pressure to ensure their children's proper education and development. Moreover, because a higher percentage of San Cristobal mothers are employed outside the home, it is presumably more difficult for them to make time for their parenting role. Overall, the greater emphasis on proper child development, combined with more demands being placed upon them outside of their maternal role, may lead to the experience of stress. Lastly, the inversed relationship between the house quality and parenting stress among San Cristobal may be explained by the presence more resources to aid them in accomplishing household tasks, thus alleviating some of their stress in their parenting and caregiver role.

Psychological adjustment. In addition, in my Dominican sample, mothers experiencing economic hardship did not report more depressive symptoms than their more privileged counterparts, contrary to what is usually documented in North-American research (e.g., Eamon &

Zuehl, 2001). It may be that the depressive symptoms among impoverished North-American mothers are the product of the stigma of failure that is often associated with poverty in the more materialistic and individualistic North American culture. Moreover, their symptoms of depression may possibly be associated with their greater sense of isolation. It is proposed that the absence of the pressures related to a monetarized economy and belonging to a collectivistic culture may shield mothers against possible triggers of sadness and depression.

However, contrary to my expectations, I did observe that Campos mothers experience more somatization symptoms than their San Cristobal counterparts. Distinct socialization processes could possibly explain these divergences. It appears that Dominican Republic Campos mothers are socialized to keep their opinions to themselves and to not offend (García-Coll & Vázquez García, 1995; Brea & Duarte, 1999), a practice that may be conducive to more somatization symptoms. Alternatively, the physical symptoms reported by Campos mothers may be accurate physiological discomforts imputable to the consumption of contaminated water and bathing in rivers (Santana & Rathe, 1993).

Overall, the contradictory findings between those of impoverished North American mothers and the Campos mothers lead one to wonder whether it is the cultural values of individualism and self-sufficiency, conveyed in a monetarized economy, that contribute to lower-SES mothers feeling isolated, stressed in their parenting role, and depressed, and not poverty itself. Indeed, I can speculate about the contribution of this monetarized economy to impoverished mothers' adjustment, considering that within this type of economy all those who do not have the resources to participate may possibly be excluded or perceived negatively.

Maternal Parenting Values

Results from my comparison of parental values across both SES/communities support Kohn's theory, according to which parents' values are associated with their social class status. As proposed by Kohn (1969), lower-SES mothers demonstrated a preference for the value of conformity, whereas higher-SES mothers were more likely to value self-direction. These results demonstrated that even in a collectivistic Latin culture, the characteristics and demands of parents' physical and social environments are associated with the behaviours they emphasize in their parenting, with lower-SES parents consistently preferring conformity and higher-SES parents constantly demonstrating a preference for self-direction.

Indeed, in agricultural villages with a simpler infrastructure, children are required to take care of their parents in old-age, and the value of conformity is conceivably most conducive to ensuring that children comply with their filial obligations. Regarding Dominican Republic's infrastructure, Santana and Rathe (1993) write that the Dominican constitution has social security programs as described in article 17 of the constitution. According to the authors, article 17 stipulates that the government is responsible for ensuring protection against unemployment, illness, invalidity, and old-age. More specifically, it states that the government is responsible for ensuring the health and wellbeing of its older population. The authors add that, in spite of this commitment made on the part of the government, effective programs have never been developed. "Este servicio nunca ha alcanzado una efectiva cobertura en la Republica Dominicana, ni se han aplicado programas ambiciosos de bienestar social" [This service has never attained a level of effective coverage in the Dominican Republic, nor has the government developed effective social

programs.] (p.109). Moreover, the little assistance they do provide reaches only 9.5% of the population, with merely 4.9% of retired individuals receiving a government pension, most of whom reside in an urban region (pension = 40 US dollars monthly). In their statement, “Esto indica que la población dominicana realmente no puede contar con mecanismos de protección que le permitan sentir alguna seguridad contra las eventualidades y los riesgos que sobrevienen con el agotamiento de las fuerzas físicas y mentales” [This indicates that the Dominican population cannot rely on governmental services to provide them with a sense of security against the risks and consequences of decreased physical and mental abilities that occur in old-age], Santana and Rathe (1993: 128) emphasize that the Dominican citizens cannot rely on the government’s assistance. As a result, most elderly people are employed, with 71% of men older than 75 years still in the workforce. Others rely on “redes familiares”, the family network. These factual data further support the possibility that Campos mothers value conformity to ensure that their children assist them in their old-age.

On the other hand, it may be that the more complex infrastructure of San Cristobal society encourages parents to promote more self-direction in their offspring. Most of these parents have social security and health coverage through their work institutions and have easier access to government resources because most of them are located in the country’s capital (Santana & Rathe, 1993). As such, they likely do not rely on their children for survival in their old-age. Overall, children are not only born into a different physical and social context, they may also be born with different purposes, these likely being embedded in the physical, economic, cultural, and political reality to which parents must adapt.

Parenting Practices

Parenting practices were also associated with the SES/community. In line with my predictions, results demonstrated that San Cristobal parents provided a more stimulating and emotionally supportive HOME environment for their children than did Campos parents. These findings are in keeping with my expectations as well as those of other studies using the HOME Inventory. For instance, Bradley and colleagues (2001) noted that poverty exerted a greater influence on the HOME environment than did culture, with poverty being associated with a less optimal HOME environment.

Nonetheless, observations made during the individual home visits could shed some light on these findings with my Dominican sample. Indeed, during the HOME observations, I noted that Campos mothers do not have the resources necessary to purchase learning materials for their children. In addition, some of these mothers do not possess these basic academic skills themselves. In fact, some of them are illiterate and have never even held a pencil or owned any reading materials. Instead, I observed that Campos mothers, like the Kokwet mothers studied by Harkness and Super (1992), spent time teaching their daughters the skills they use daily. For example, mothers taught their daughters how to attend to younger siblings, prepare food, and clean the house and the yard. In the Campos, a child as young as three years can be seen cleaning the beans for lunch. It is therefore not possible for mothers to teach their children skills they themselves have never been taught and, what is more important, have been able to do without in their adult life. Inversely, I observed most San Cristobal children spending their days engaged in play and educational activities. The children who contributed to household chores did so

minimally, which is consistent with observations of Cambridge children.

Moreover, I found a gender effect in the quality of the home environment offered to children, with male children receiving less emotional support and Campos boys receiving the least. This gender effect may possibly be explained in terms of a distinct socialization process for male and female children, due to the strong adherence to gender roles in the Dominican culture (Brea & Duarte, 1999). Indeed, as I observed during my home visits, while girls are being asked to contribute to household tasks, boys are free to wander in the community and are assigned tasks outside of the home (e.g., fetching wood, purchasing items at the store). This work division is consistent with the belief that women's environment is the home, whereas a man's place is in the street or community (Brea & Duarte, 1999). However, by spending less time in the home environment, male children may be afforded fewer opportunities for support from their caregiver.

Furthermore, Hoff-Ginsberg and Tardif (1995) proposed that poverty introduced more tension into family relations. Once again, this link was not observed in my Dominican sample. Campos mothers did not report a more conflictual relationship with their children, relative to San Cristobal mothers. It is conceivable that Campos parents are too preoccupied with meeting the family's survival needs and ensuring that each contributes to the family's chores to attend to the quality of their parent-child relationship. Indeed, a work-focussed relationship based on conformity may be appraised on different standards than a relationship based on development and self-direction. Also, it is possible that similar to tropical African mothers (Luster & Okagaki, 1993; Harkness & Super, 1995), Dominican Campos caregivers spend their time working and

interacting with adults and do not make their children their primary social network, which may further shield them against experiencing conflict in their parent-child relationship.

Link among the Three Components of the Developmental Niche:

Physical and Social Environment, Caregiver Psychology, and Parenting Practices

Link between Parenting Values and Parenting Practices

Kohn (1969) proposed that parents' employment influences their parenting values and that these values translate into different childrearing practices. In turn, as stipulated in my fourth hypothesis, these value laden parenting behaviours influence the types of relationships parents have with their children. As mentioned earlier, in my Dominican sample, lower-SES mothers demonstrated a preference for the value of conformity, whereas higher-SES mothers valued self-direction, which is consistent with Kohn's social class theory. Also, in keeping with Kohn's theory and my prediction, a preference for the characteristics associated with conformity was significantly associated with a less emotionally supportive HOME environment across both SES samples. Overall, Dominican mothers' views on parenting seem to be associated with the type of HOME environment they provide for their children. These findings support the applicability of Kohn's theory to parenting values and behaviours in the Dominican Republic.

Link between Physical and Social Environment, Maternal Psychology, and Parenting Practices

A review of the correlational data (refer to Table 18) informed us that SES/community was significantly correlated with all maternal psychology variables and parenting practices, with the exception of mothers' overall psychological adjustment. In turn, mothers' experience of social support was associated with less stress in their parenting role and better psychological adjustment.

Less parenting stress and better mental health were also associated with a more positive appraisal of the parent-child relationship. In addition, mothers' psychological adjustment was associated with the provision of a more cognitively stimulating and emotionally supportive HOME environment, with these two dimensions of the parenting being intercorrelated.

Based on these patterns of correlation, it is conceivable that the quality of parenting offered to children is filtered through the quality of mothers' social support network and its ability to alleviate her parenting stress and prevent the development of psychological problems. Support possibly serves as a buffer against negative emotions and as a promoter of greater wellbeing. In turn, this greater wellbeing may promote a more positive experience in the parent-child dyad and a more stimulating and emotionally supportive HOME environment. Moreover, the correlation between SES/community and all other variables points to the strength of the characteristics of the physical and social environment on the maternal psychology and parenting practices components of the developmental niche.

More specifically, in the Campos, SES/community differences seem to emanate from the association of family income with the house quality and educational opportunities available in the neighbourhood. The quality of the home and educational opportunities are associated with mothers' experience of parenting distress and psychological adjustment, which in turn are associated with her parenting abilities. Among Campos mothers, support is associated with greater wellbeing. Regardless, the contribution of the physical and social environment on the parenting process seems to outweigh the salutary effect of support.

Overall, the links observed between the physical and social environment, maternal psychology, and parenting values and practices are in keeping with the relations observed in the explanatory models proposed in the literature on poverty, in which the pernicious effects of financial strain are filtered through maternal psychology and parenting practices before exerting their influence on children's development (McLoyd & Wilson, 1991; McLoyd, 1990). These findings also support Harkness and Super's (1995) concept of a developmental niche in which the physical and social environment, maternal psychology, and parenting practices interact to influence the reality of children's daily environment.

Developmental Niche and Children's Development and Adjustment

The results with my Dominican sample demonstrated that all three dimensions of children's developmental niche are associated with SES/community and possibly interact to create a very distinct developmental environment for both samples of Dominican children. Moreover, results revealed that each dimension of the developmental niche is associated with children's development and adjustment. I will review the differences between children's development across both SES environments, and in relation to mothers' characteristics and the quality of parenting offered.

Characteristics of the Physical and Social Environment and Children's Development

As per my expectations presented in hypothesis 3, children's development differed in each SES/community. Campos children were weaker than their San Cristobal counterparts in letters, numbers, and global development. Campos children were also weaker than their San Cristobal counterparts in all academic subjects and in overall academic achievement. These findings mirror

those of the earlier researchers regarding the influence of poverty on academic achievement and cognitive development (e.g., Bradley & Corwyn, 2002; McLoyd, 1998; Korenman et al., 1995; Bradley & Corwyn, 2003).

In addition, differences in children's prosocial behaviours were noted in parents' ratings. More specifically, contrary to my predictions and research findings reporting that children residing in agricultural villages display more prosocial behaviours (Eisenberg & Mussen, 1989), Campos parents reported less prosocial behaviours in their children relative to San Cristobal parents.

Rather, my findings are in keeping with those suggesting erosion of moral development by conditions of economic deprivation (Elbedour, Baker, & Charlesworth, 1997). In fact, it is possible that, in the absence of basic necessities, it is difficult for children to share (Maslow, 1954). Another explanation may be that, given that prosocial skills are learned in the parent-child relationship, Campos children spend less time in direct interaction with their maternal figure and may be deprived of this formative experience. Conversely, no differences were noted between the parents' and teachers' rating of the children's socioemotional adjustment. A somewhat lower endorsement of behavioural problems in their children by Campos mothers, relative to the ratings of their own children by higher-SES caregivers, is contrary to my expectations and current trends in the literature (Bradley & Corwyn, 2002; McLoyd, 1998; Gottfried et al., 2003; Duncan & Magnuson, 2003) in which the latter reports a greater prevalence of socioemotional adjustment problems among children living in conditions of economic deprivation. I propose that because Campos children spend a great portion of their time outdoors running around or completing

chores, this may shield these children from being perceived as having behavioural problems by their parents.

In addition, I administered a self-perception measure to eight year-old children in order to determine if there was a link between children's view of themselves and their SES environments. Our findings are contrary to Gottfried and colleagues' (2003) findings that SES exerts a greater influence on children's school self-concept than on their general self-concept. In fact, San Cristobal children reported a more positive social and personal self-perception than the lower-SES Campos children but no difference was noted on the school and athletic self-perception scale. Nevertheless, the presence of an inferior self-perception among impoverished children is in keeping with Weinger's (1998) observation that awareness of their SES gradually infringes on children's self-view. With my sample of Campos children, I propose that the erosion of their overall life satisfaction stems from the demands of daily living more than through awareness emanating from a comparison process. Support for such an explanation is based on the quasi-absence of interaction between the lower and higher-SES samples. In the absence of interactions between the two SES groups, this awareness to which Weinger (1998) refers is possibly less likely. It is postulated that the absence of a negative school and athletic self-perception among both samples may be accounted for by impoverished children's comparing themselves only within their peer group, due to a lack of awareness of better academic and athletic performances being obtained by their higher-SES counterparts.

Lastly, contrary to my expectations and Ramsey's (1998) findings on the negative effects of poverty on friendships, children's interpersonal relationships and peer perceptions did not differ by SES/community. It is possible that the collectivistic value that encourages friendship and getting along buffers children against the effects of economic deprivation on social integration. In fact, how children were perceived by their peers was best explained by their gender.

Gender Differences

A stereotypical gender effect was noted in children's adjustment scores. Teachers endorsed more behaviours indicative of a socioemotional problem for male students. Boys also received significantly more nominations for the least liked, were more frequently chosen as most aggressive and as more socially isolated. While these gender effects are consistent with the present literature on children's adjustment (Achenbach et al., 1987), they may also be explained by the presence of "machismo", namely, sex role stereotypes and a well-defined work division among Dominicans (Vargas, 1998; Brea & Duarte, 1999). Male children's greater display of more aggressive behaviours could possibly be interpreted as the emergence of the skills they will need in this "macho", patriarchal, and gender-role stereotyped society. Conversely, female children's more obedient predisposition may be in keeping with their role as women (Garcia-Coll & Vasquez Garcia, 1995).

Nonetheless, as reported by Pachter and Harwood (1996), these gender role differences cause children to spend less time with their opposite sex parent. As mentioned earlier, I also observed this pattern in my research as evidenced by male children receiving less emotional support. In light of the link between the quality of parenting received and emotional and

behavioural adjustment, as is noted in most North-American research (e.g., McLoyd, 1998, Bradley & Corwyn, 2002), it is possible that male children's less prosocial disposition and display of aggressive behaviours is a manifestation of their unmet needs. It is plausible that when male children are not afforded as much time with their caregiver, they are deprived of opportunities to learn important social and emotional skills conveyed within the parent-child relationship (Eisenberg & Mussen, 1989).

Age Differences

A more cognitively stimulating and emotionally supportive HOME environment was also afforded to younger children in my study. This finding lends support to mothers' ability to monitor their children's differing level of needs at different developmental stages, with younger children requiring more of their attention and affection. Also, it is possibly easier for mothers to provide their younger children with cognitive stimulation at this developmental period because this type of teaching does not yet require complex learning materials and toys.

Furthermore, parents in both SES samples perceived their relationships with younger children as more difficult, and Campos parents perceived their younger children to display more problematic behaviours. San Cristobal teachers also reported more emotional and behavioural problems in their younger students. These results are in keeping with the present knowledge of child development, with younger children requiring more parental monitoring and attention. Therefore, I propose that the age effect in my findings may be a product of children's developmental process and stage.

Alternatively, San Cristobal parents reported significantly more prosocial behaviours in older children, whereas teachers endorsed less prosocial behaviours for older San Cristobal students, this tendency being inverted for Campos students. As mentioned earlier, the greater endorsement of prosocial behaviours in older San Cristobal children by their parents is possibly best explained by the general developmental process by which older children are likely more socially skilled and more attentive to other people's feelings. In turn, teachers' lower endorsement of prosocial behaviours in older San Cristobal children may be the result of these children not meeting these teachers' greater expectations. It is possible that in the private schools that these more affluent children attend, they are held to high behavioural standards. In fact, observations of classroom rules during visits support this possibility. In turn, it is difficult to comment on the age effect noticed among Campos children. Because some older children are still in grade one this may lead to teachers rating their behaviours as more prosocial in comparison to their younger classmates.

Caregiver Psychology, Parenting Practices, and Child Development and Adjustment

Child Development

In my fifth and last hypothesis I proposed that children's development would be linked to caregiver psychology and parenting practice variables. Regression analyses revealed that the presence of a better social support network among Campos mothers predicted an inferior score on the letters subscale of the CDI. In turn, none of the maternal psychology variables predicted San Cristobal children's development, as measured by the CDI subscales. The links between maternal psychology and impoverished children's developmental outcomes, as observed in the present

North-American literature (e.g., McLoyd, 1990; McLoyd & Wilson 1991; Bradley & Corwyn, 2002), have not been replicated in my study. The association between maternal social support and mediocre acquisition of letters may be explained by the high level of illiteracy among Campos mothers, most of whom rely on their social network for their survival.

Nonetheless, although children's development was not associated with maternal psychological adjustment, all subscale scores among Campos children, with the exception of fine motor skills and expressive language, were strongly associated with the provision of cognitive stimulation. The self-help scale was also associated with the quality of the emotional support afforded in the HOME setting. Also, the acquisition of fine motor and general development skills by Campos children was associated with the quality of the parent-child relationship. On the other hand, San Cristobal children's development (e.g., social and gross motor skills) was associated with the presence of an emotionally supportive HOME environment.

Once again, these findings are consistent with my present understanding of the contribution of the HOME environment to children's development as filtered through the quality of the learning experiences and the quality of the academic and language stimulation offered in the children's home environment (e.g., Bradley et al., 1994; Bradley & Corwyn, 2002; Hoff-Ginsberg & Tardif, 1995; Hoff, 2003). Also, the link between the quality of the cognitive stimulation provided in the HOME environment and children's better language development is consistent with the present literature on the importance of language stimulation in the family environment (Hoff-Ginsberg & Tardif, 1995; Hoff, 2003). In addition, the association between children's development and the quality of the parent-child relationship supports the salutary effect

of the parent-child relationship (Bradley & Corwyn, 2003; NICHD, 2004). Indeed, parents who have a closer relationship with their children may possibly be more likely to engage them in activities that promote their development (Bradley & Corwyn, 2003). Also, children who enjoy their relationship with their caregiver are probably more likely to want to learn from them (Wyatt, 1969).

Nevertheless, Campos children's overall development was more strongly associated with the provision of cognitive stimulation, whereas San Cristobal children's overall development was more strongly linked to the quality of the emotional support provided by San Cristobal mothers. One possible explanation for this divergence is that Campos children may be afforded few educational opportunities and have very little exposure to educational materials. In such a HOME setting, any type of cognitive stimulation may possibly be conducive to better development. Inversely, it may be that San Cristobal children are afforded many formative and enriching experiences. For instance, many are enrolled in preschool programs or extracurricular activities and have access to varied educational material and toys in their HOME environment. In such a stimulating surrounding, what distinguishes those who have a better development may possibly be the additional provision of emotional support and warmth.

Socioemotional Adjustment

Children's socioemotional adjustment in both SES samples was significantly predicted by their primary caregiver's overall psychological adjustment. More specifically, Campos mothers' distress in their parenting role was significantly associated with their offspring's emotional and behavioural problems. The contribution of mothers' psychological wellbeing to the adjustment of

their offspring is consistent with the North-American literature (e.g., Bradley & Corwyn, 2002; McLoyd, 1990; McLoyd & Wilson, 1991). In addition, parents who are struggling with their own stressors may be less likely to serve as a positive coping model to their children.

Furthermore, teachers' ratings of adjustment problems in their students were more strongly associated with a less emotionally supportive HOME environment across both Campos and San Cristobal samples, further supporting the relevance of the maternal figure's ability to be responsive and warm to children's optimal socioemotional development (McLoyd, 1998). Also, low and high SES mothers' view of their child as difficult was very strongly associated with their more negative appraisal of the parent-child relationship. In addition, the association between children's adjustment difficulties and a conflictual parent-child relationship is consistent with research findings supporting the protective value of a healthy parent-child relationship (NICHD, 2004). Overall, in my Dominican sample, children's emotional and behavioural adjustment was strongly associated with their primary caregivers' own psychological adjustment and ability to provide an emotionally supportive HOME environment and a healthy parent-child relationship, regardless of SES/community.

Prosocial Behaviours

Children's prosocial conduct, in both SES samples, was associated with the quality of the HOME and family environment. The HOME and family variables as a whole were predictive of Campos children's prosocial disposition, even though none of the variables were individually significant. In the San Cristobal sample, prosocial behaviours in children, as rated by the maternal figure, were best explained by the presence of an emotionally supportive HOME environment. As

depicted by Eisenberg and Mussen (1989) in their review of the roots of prosocial behaviour in children, when parents are able to provide an emotionally supportive home environment for their children, they are also likely teaching their children how to cultivate positive interpersonal relationships and serving as an interpersonal model to emulate. Therefore, the link between the provision of emotional support and children's prosocial disposition may possibly be explained by the process of imitation and identification by which children do as they see their parents doing.

Self-Perception

In addition, an emotionally supportive HOME environment was also predictive of Campos children's positive view of themselves and their lives. Once again, children's positive social integration was associated with the mother's ability to display warmth and support in her parent-child relationship. These findings again mirror those of the present literature on the salutary effect of the parent-child relationship (e.g., Dodge et al., 1994) as well as the literature pertaining to the quality of the HOME environment (e.g., Bradley & Corwyn, 2003). It may be that in their interactions with their mothers, children internalize a social image of self and their personal value. When mothers are warm and supportive, children can internalize a positive view of themselves and their social abilities and feel good about their lives.

In overview, these findings further support the HOME Inventory's value as a screening tool for the adequacy of the cognitive stimulation and emotional support provided in the home environment (Bradley et al., 2001; Bradley, 1989; Bradley, 1993). Indeed, the association between children's cognitive and socioemotional adjustment and both dimensions of the HOME lends

support to the validity of both emotional and cognitive stimulation to optimal child development (Caldwell & Bradley, 1984; Bradley et al., 2001).

Protective Functions of the Developmental Niche Dimensions

It appears that some developmental skills are better explained by maternal psychology and parenting practices than by the physical and social setting, even though they may be influenced by this developmental context. For instance, the social, self-help, and gross motor skills that did not differ by SES/community are the developmental abilities most strongly associated with the provision of emotional support. In addition, the perception of the child as difficult did not differ by SES/community. Instead, the mother's appraisal of their child was linked to their appraisal of their parent-child relationship.

In overview, it seems that even though maternal psychology and parenting practices are affected by the demands and characteristics of the physical and social environment, these dimensions of the developmental niche also possibly make unique contributions to children's development, independent of that explained by this setting. Overall, it seems that children's acquisition of academic skills is strongly linked to the provision of cognitive stimulation by parents. Conversely, children's emotional adjustment and social skills are best acquired when mothers experience less parenting stress and are able to provide a warm environment and positive parent-child relationship to their children. It is possible that in their interactions with their offspring, mothers offer a role model to emulate and provide an opportunity to learn and practice important social skills. It may be within this relationship that children learn how to socially

interact, to use language as a communicative tool, to understand appropriate displays of emotions and socially acceptable behaviours, as well as internalize a positive view of self.

In essence, the lack of association between economic deprivation and the quality of the parent-child relationship points to the possibility of having a healthy parent-child dyad in spite of an impoverished environment and demanding life conditions. Indeed, even in an impoverished environment, the type of relationship a mother has with her offspring is important and can serve as a buffer against the pernicious effects of poverty (e.g., NICHD, 2004).

Caregiver Tasks

In my Dominican study, I measured the components of care giving seen as essential by Bradley (1995). Sustenance was measured by means of the house-material quality scale. The cognitive stimulation composite scale measured stimulation and the emotional support composite scale measured structure and support and surveillance. All of the components of parenting Bradley (1995) perceives as essential were associated with children's optimal development.

However, among the two SES samples, there was a different emphasis on which of the components of the caregiver roles that were provided to children. It seems that Campos mothers place more emphasis on sustenance, whereas San Cristobal mothers place more importance on the stimulation, structure, support, and surveillance components. The way mothers were able to achieve the caregiver tasks may be associated with the characteristics of the physical and social environment within which these parenting tasks are accomplished. More specifically, Campos mothers who reside in homes and neighbourhoods with few resources possibly spend more time on the sustenance tasks, whereas San Cristobal mothers who reside in more luxurious and

comfortable homes located in a more complex social structure may have many of these sustenance tasks taken care of by virtue of the quality of their homes and financial resources. As a result, these mothers are possibly free to spend more time on other caregiver tasks such as the provision of cognitive stimulation and emotional support. It is conceivable that Campos mothers are not less devoted to their parenting role but they are merely too occupied with ensuring their children's and family's survival to attend to other important parenting tasks such as cognitive stimulation and monitoring their child's development. As noted by Hannan and Luster (1991), few mothers can provide high quality care when many other daily obstacles use up their resources.

The idea of parents beginning their parenting at different levels based on their physical and social environment is also reflected in the work of Levine (1974). His hierarchy of parental goals stipulates that parents begin by ensuring their offspring's survival, followed by teaching of skills that will ensure future self-maintenance and then the transmittal of culture specific values. It may be that Campos mothers are working on ensuring the survival of their offspring and the family unit (sustenance). As observed during the home visits, Campos mothers spend a lot of time teaching their children daily chores, skills they believe will prepare their children for survival in adulthood. In fairness, Campos mothers may not necessarily provide less stimulation, they possibly merely provide learning experiences more in keeping with their daily reality (e.g., how to cultivate food, cook, collect wood, attend to younger siblings, carry water, wash clothing, and clean the home). On the other hand, San Cristobal mothers, who belong to a different economic system, spend more time teaching their children more universal skills, such as academic success or culture-specific skills. In overview, if parents begin at different levels on the parenting

hierarchy, can we still expect them to arrive at the same level of parenting and child development? Moreover, if both belong to very distinct physical and social environments with a need for distinct adaptational skills, is it desirable for both SES sample mothers to be teaching their children the same skills and parenting their children in the same manner? Indeed, in considering the distinctness of their developmental niches, can we still talk of more or less optimal development, or should we be having the discussion in terms of being prepared for different lives? Nevertheless, when children learn environment specific skills, they may be restrained to that environment.

Limits of the Present Study and Future Research Directions

This study has a number of limitations, some of which also suggest directions for future research. These include the potential confounding impact of reliance on maternal reports of their social support network, psychological adjustment, parenting stress as well as their children's psychological adjustment, prosocial behaviour, and cognitive development, rather than on direct observation. Reliance on maternal report may have introduced unmeasured biases. For instance, mothers who are experiencing more parenting stress may have been more inclined to perceive their children as more difficult and less prosocial. I attempted to counter this problem by adopting a multi-measure multi-informant approach. For instance, I had teachers rate children's socioemotional adjustment and prosocial behaviour in addition to mother's ratings. I also obtained peer nominations and had children complete a self-report measure. Even so, reliance on maternal report remains a limitation and the introduction of more observational measures in future research may provide useful information.

Secondly, while parenting is the focus of this study, mothers were the only parental informants. There are several reasons why in spite of using the term parenting I did not include fathers in my assessment. First, there is a very strong work division among the Dominican. As previously stated, the home is the domain of women whereas men belong to the street (Brea & Duarte, 1999). As such, taking care of children is mostly women's responsibility. Having the fathers complete the questionnaires may have been construed as a lack of respect for this sex role stereotype specialization. Also, when children do not belong to a nuclear family, as many do not, they are predominantly with their mothers. It may have been difficult to find these children's father. In addition, even when children belong to a nuclear family, the male presence may not be their biological father but for the most part, they are living with their biological mothers. Furthermore, during the data collection I observed that some men have more than one family. When mothers were asked how many children they have and then fathers, there were some discrepancies. As can be expected, this created some tension in the family unit during the home visits as this is not something that women seem to have permission to talk about. Moreover, mothers appeared to become somewhat uncomfortable when children informed the writer of such or stated that the male figure in the household is not their biological father. Reportedly, in some families, when women begin a new relationship with a man, their children are given this man's family name in order to recreate a nuclear family unit. Therefore, to be respectful of the families in which I was invited, the emphasis was placed on mother's experience of parenting. Lastly, in some families, fathers spent very little time with their children and it would have been difficult for them to fill out the questionnaires. Inversely, in the more educated San Cristobal sample, some fathers offered to complete the questionnaires. In these families, both parents are employed and

their seemed to be less of a stereotyped work division. However, these were the rare exceptions. Even so, reliance on mothers only is a limit and it would be important that future research consider fathers' views on parenting.

In addition, the results of this present study are tentative due to the number of variables per subject. While reviewing the literature on the effects of poverty on children, I noted that most studies exploring the link between poverty and children's development had not, to date, been comprehensive. I believed that the focus on one developmental dimension at a time complicated the study of pathways of influence because the home and parenting variables that affect child development may differ for each developmental dimension. Moreover, the variables in the impoverished physical environment that affect one aspect of parenting and the quality of the home setting may differ from those that affect other dimensions of these variables. In an attempt to fill some of these gaps, I proposed to consider several child development dimensions simultaneously thus increasing the number of measures in my study. In addition, the research grew during my stay in the Dominican Republic. As I immersed myself in the Dominican lifestyle and tried to make sense of my observations and experiences, I started to document new information such as the neighbourhood resources, educational opportunities, and why mothers have children in spite of their conditions of poverty. I believe that this process was an important one to my growth along with the growth of the research project. To my surprise, many of the questions I asked during the data collection experience were the same as those asked by Hoffman (1987) and Levine (1974) as well as other researchers. Overall, I believe that the inclusion of many measures was important to this kind of research in order to portray the Dominican children's and parents' experience as accurately as is possible with the measures available and within my ability to observe and learn.

Nonetheless, the inclusion of many measures complicated the data analysis process and increased the likelihood of making type I errors. It likely also complicated my ability to present the data findings in the most clear and concise manner. Indeed, more research with larger samples is required.

It is also recommended that future research be done with a larger sample of children from other regions of the Dominican Republic. As reported by Santana and Rathe (1993), the Dominican Republic can be divided into three geographical areas: (1) the South East, comprised of the National capital, which is the most populated; (2) the South West, which is the least populated and least developed and shares a border with Haiti; and (3) the North, described as having the best standard of living outside of Santo Domingo. It is conceivable that each of these geographic regions present distinct physical and social environments. Therefore, the information gathered in this thesis can possibly not be generalized to these other areas. Undoubtedly, more research is required in order to gain a better appreciation for the effects of economic deprivation on Dominican children residing outside of the region studied.

The lack of testing inter-rater reliability for the observed measures combined with their administration with the principal investigator is another limitation. Indeed, by virtue of my being the only researcher out in the Dominican Republic, it was difficult to do an inter-rater reliability. Some attempts were made to have another Dominican woman participate in the research for this purpose. However, due to a lack of literacy and appreciation of the use of measures for research purposes, this individual was not able to administer the measure. Therefore, it was decided to not proceed with her participation in the home visits. Instead, I hoped that by having the same researcher administer all HOME Inventories this provided some consistency. Nevertheless, the

lack of inter-rater reliability is another limitation to the methodology used in this study. Other limitations of the methodology include the use of a cross-sectional research design, the non-equivalent samples recruited from the two SES/communities, and the use of different methodologies (e.g., interviews for Campos mothers versus self-administration for San Cristobal mothers) to collect data.

Furthermore, it would be important for future research to not only assess Dominican children based on valued North American abilities but to also tap into what these children are learning instead of letters and numbers. It is possible that these children are not less developed, but rather, they are simply not developing in a manner that is consistent with middle-class North American values. On the other hand, San Cristobal children who are likely being prepared for a life more similar to ours are learning these basic academic and interpersonal skills. It is postulated that if I were to assess San Cristobal children on an ability scale made of Campos skills, they may be weaker and possibly demonstrate more adaptational difficulties.

In light of the global developmental problems associated with being born prematurely in conditions of poverty, it is also recommended that future research include a health measure and a developmental history. Because neither their health status nor their health history were documented in this study, it is impossible to determine the contribution of the Dominican children's health status to their developmental outcome.

Future research would also need to consider maternal marital satisfaction. During informal conversations with mothers, some made reference to their spouse's infidelity. These women were emotional as they spoke of their husbands being unfaithful and some having children with other

women. It is possible that marital strain may affect mothers' psychological wellbeing and, in turn, their ability to be emotionally available to their children.

One final point of consideration regarding future research directions has to do with the observed link between the social support network and maternal psychological wellbeing. It would be interesting to further study the protective factors against depression and the mechanisms that underlie the development of a supportive social network in conditions of poverty.

Despite the methodological limitations of the present study, I believe that the findings have clinical and social relevance. Indeed, the main contribution of the present study is the collection of data in a country that has not, to my knowledge, been previously studied. This study has also made a distinction between which outcomes are universal (e.g., link between poverty and quality of the home environment) and which are more culture specific (e.g., maternal depression, lack of social support). Lastly, this study supports the importance of a cognitively stimulating and emotionally supportive home environment to children's optimal development as well as the importance of a healthy parent-child relationship. Most importantly, the findings support the possibility of having this healthy parent-child relationship even in conditions of economic Hardship.

CONCLUSIONS

In overview, SES/community and culture are multifaceted variables that may act as organizing forces in the daily lives of parents and children. The interaction between culturally prescribed behaviours and resources available in the physical and social setting conceivably create specific adaptation needs. Overall, the results indicated that SES/community was associated with a very distinct daily context for both mothers and their offspring. Campos child and mother dyads

belong to a lower income family unit, reside in inferior quality homes in neighbourhoods with less health, educational, and community institutions.

Also, the distinct SES/communities were related to mothers' parenting stress, psychological adjustment, social support network, parenting values, quality of HOME environment, and several dimensions of children's cognitive development and socioemotional adjustment. Nonetheless, the relationship between poverty and maternal social isolation, parenting distress, and depression as is observed in mainly North-American research was not supported with my Dominican sample nor was the link between financial strain and increased tension in family interactions. Belonging to a collectivistic culture and a nonmonetarized economy may serve as protective factors against the pernicious effects of impoverishment on maternal psychology. The strong religious beliefs and active participation in religious practices may have also served as protective factors. Conversely, some links between poverty and parenting appear as more universal concepts. In keeping with findings from present North-American literature on the effects of poverty, Campos mothers were noted to provide a less cognitively stimulating and emotionally supportive HOME environment and to value conformity. Indeed, in simpler environments such as those of the agricultural villages of the Dominican Republic, parenting may start with ensuring their children's survival and meeting their basic needs, whereas parenting in more complex higher-SES Dominican environments possibly begins at child development.

Furthermore, in light of their very different daily realities, it is not surprising that Dominican children's development differs in each SES/community, with children belonging to simpler more impoverished environments being weaker on most North-American developmental

dimensions. Campos children were found to be weaker on tasks of an academic nature, such as letters, numbers, and global development skills as well as their academic grades. In addition, parents rated Campos children as less prosocial. Lastly, economically deprived Campos children reported a more negative social and personal self-perception. Nevertheless, some links between poverty and child development, as is observed in the mainly North-American literature, were not supported by findings with my Dominican sample. For instance, impoverished Campos children were not perceived by their parents and teachers as more emotionally and behaviourally maladjusted nor as more difficult. They also did not display more interpersonal skill deficiencies or an inferior view of their academic and athletic abilities.

A review of the links between the developmental niche and children's outcome variables suggests that some developmental skills are better explained by the maternal psychology and parenting practices than by the SES/community, even though they may be influenced by SES factors. For instance, children's acquisition of skills of an academic nature is strongly linked to the provision of cognitive stimulation by parents. Conversely, children's emotional adjustment and social skills are best acquired when mothers are able to provide a warm environment and a positive parent-child relationship to their children.

In sum, even in an impoverished environment with a simple social structure characterized by a lack of resources, what mothers do matters. Having a warm and emotionally supportive maternal relationship has a salutary effect on children's emotional and behavioural adjustment, as rated by teachers. Regardless of parents' values and skills taught their children, how parents

interact with their offspring may contribute to how children view their lives and themselves, and influence their feeling and behaviours with others.

Nonetheless, these aforementioned questions remain worthy of further consideration. If parents begin at different levels on the parenting hierarchy, can we still expect them to arrive at the same level of parenting and child development? Moreover, if both belong to very distinct environments with a need for distinct adaptational skills, is it desirable for both SES environment mothers to be teaching their children the same skills and parenting their children in the same manner? Indeed, in considering the distinctness of their developmental niches, can we still talk of more or less optimal development or should we be having the discussion in terms of being prepared for different lives? Perhaps, when conducting intercultural studies, more understanding is gained by the questions we are left to ponder than by the answers gleaned. Even still, these questions may serve as the lens through which I will start looking at the children and families with whom I will be entrusted to work, regardless of the setting.

References

- Abidin, R. R. (1990). *Parenting stress index*. Odessa, FL: Psychological Assessment Resources.
- Abidin, R. R. (1995). *Parenting stress index: Professional manual* (3rd ed.). Odessa, Florida: Psychological Assessment Resources.
- Achenbach, T., Verhulst, F., Edelbrock, C., Baron, G. D., & Akkerhuis, G. (1987). Epidemiological comparisons of American and Dutch children: II. Behavioral/emotional problems reported by teachers for ages 6-11. *Journal of the American Academy of Child and Adolescent Psychiatry*, 26(3), 326-332.
- Arias, E. & De Vos, S. (1996). Using housing items to indicate socioeconomic status : Latin America. *Social Indicators Research*, 38(1), 53-80.
- Asher, S. R., & Dodge, K. A. (1986). Identifying children who are rejected by their peers. *Developmental Psychology*, 22 (4), 444-449.
- Bates, D. S., & Toro, P. A. (1999). Developing measures to assess social support among homeless and poor people. *Journal of Community Psychology*, 27(2), 137-156.
- Bolger, K. E., Patterson, C. J., Thompson, W. W., & Kupersmidt, J. B. (1995). Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship. *Child Development*, 66(4), 1107-1129.
- Bornstein, M. H. (1991). *Cultural approaches to parenting*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bornstein, M. H. (1995). *Handbook of parenting: Biology and ecology of parenting* (Vol.2). New Jersey, USA: Lawrence Erlbaum Associates.
- Bornstein, M.H. & Bradley, R. H. (2003). *Socioeconomic Status, Parenting, and Child Development*. New Jersey, USA: Lawrence Erlbaum Associates.
- Bornstein, M.H., Hahn, C., Suwalsky, J.T., & Haynes, M. (2003). Socioeconomic Status, Parenting, and Child Development: The Hollingshead Four-Factor Index of Social Status and the Socioeconomic Index of Occupations. In M.H. Bornstein and R.H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp. 29-82). New Jersey, USA: Lawrence Erlbaum Associates.

- Bradley, R. H. (1995). Environment and parenting. In M. Bornstein (Ed.), *Handbook of Parenting: Biology and ecology of parenting* (Vol. 2, pp. 235-261). New Jersey, USA: Lawrence Erlbaum Associates.
- Bradley, R. H. (1989). HOME Measurement of maternal responsiveness. *New Directions for Child Development*, 43, 63-74.
- Bradley, R. H. (1993). Children's home environments, health, behaviour, and intervention efforts: A review using the HOME Inventory as a marker measure. *Genetic, Social, and General Psychology Monographs*, 119(4), 437-490.
- Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, 53(1), 371-399.
- Bradley, R. H. & Corwyn, R. F. (2003). Age and ethnic variations in family process mediators of SES. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 161-188). New Jersey, USA: Lawrence Erlbaum Associates.
- Bradley, R. H., Corwyn, R. F., Pipes McAdoo, H., Garcia Coll, C. (2001). The Home Environments of Children in the United States Part 1: Variations by Age, Ethnicity, and Poverty Status. *Child Development*, 72(6), 1844-1867.
- Bradley, R. H., Corwyn, R. F., Whiteside-Mansell, L. (1996). Life at home: Same time, different places. *Early Development and Parenting*, 5(4) 251-269.
- Bradley, R., Whiteside-Mansell, L., Mundfrom, D., Casey, P., Kelleher, K., & Pope, S. (1994). Early indications of resilience and their relation to experiences in the home environments of low-birthweight, premature children living in poverty, *Child Development*, 65(2), 346-360.
- Brea, R. & Duarte, I. (1999). *Entre la calle y la casa: Las mujeres dominicanas y la cultura politica a finales del siglo XX*. Dominican Republic: Editora Buho.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185-216.
- Brody, G. H., & Flor, D. L. (1998). Maternal resources, parenting practices, and child competence in rural single-parent African American families. *Child Development*, 69(3), 803-816.

- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Brookings, J. B., & Bolton, B. (1988). *American Journal of Community Psychology*, 16(1), 137-147.
- Brooks-Gunn, J., & Duncan, G. (1997). The effects of poverty on children. *Future of children*, 7(2), 55-71.
- Caldwell, B. M., & Bradley, R. H. (1984). *Home observation for measurement of the environment*. Little Rock, Arkansas: University of Arkansas.
- Canadian Council on Social Development. (1996). *Incidence of Child Poverty by Province, Canada, 1990-1996*. [On-line]. Retrieved April 5th, 1999 from <http://www.ccsd.ca/factsheets.fscphis2.thm>
- Cohen, G. (1981). Culture and educational achievement. *Harvard Educational Review*, 51(2), 270-285.
- Cohen, S., & Hoberman, H. (1983). Positive Events and Social Support as Buffers of Life Change Stress. *Journal of Applied Social Psychology*, 13(2), 99-125.
- Cohen, S., Mermelstein, R., Kamarack, T., & Hoberman, H. M. (1985). Measuring the functional components of social support. In I. G. Sarason & B. R. Sarason (Eds.), *Social Support: Theory, research, and applications*. Dordrecht, The Netherlands: Martinus Nijhoff.
- Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: a five year longitudinal study. *Merrill-Palmer Quarterly*, 29(3), 261-282.
- Coie, J. D., & Dodge, K. A. (1988). Multiple sources of data on social behavior and social status in the school: A cross-age comparison. *Child Development*, 59(3), 815-829.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18(4), 557-570.
- Conger, R. D., Conger, K. J., & Elder, G. (1997). Family economic hardship and adolescent academic performance: Mediating and moderating processes. In G. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp.288-310). New York, USA: Russell Sage Foundation.

- Conger, R., McCarty, J., Yang, R., Lahey, B., & Kropp, J. (1984). Perception of child, childrearing values, and emotional distress as mediating links between environmental stressors and observed mental behavior. *Child Development*, 55(6), 2234-2247.
- Croog, S. H., Levine, S., Testa, M. A., Brown, B., Bulpitt, C. J., Jenkins, C. D., Klerman, G. L., & Williams, G. H. (1986). The effects of antihypertensive therapy on quality of life. *New England Journal of Medicine*, 314(26), 1657-1664.
- Crouter, A. C. (1984). Participative work as an influence on human development. *Journal of Applied Developmental Psychology*, 5(1), 71-90.
- Crouter, A. C. & McHale, S. M. (1993). The long arm of the job: Influences of parental work on childrearing. In T. Luster and L. Okagaki (Eds.), *Parenting: An ecological perspective*. (pp. 179-202). New Jersey, USA: Lawrence Erlbaum Associates.
- D'Andrade, R. & Strauss, C. (1992). *Human motives and cultural models*. New York: USA: Cambridge University Press.
- DeGarmo, D. S., Forgatch, M. S., Martinez, C. R. (1999). Parenting of divorced mothers as a link between social status and boys' academic outcomes: unpacking the effects of socioeconomic status. *Child Development*, 70 (3), 1231-1245.
- Derogatis, L. R. (1993). *Brief Symptom Inventory: Administration, scoring and procedures manual*. Minneapolis, MN: National Computer Systems.
- Diaz, J. O., Noguera, J. A., & Draguns, J. (1984). MMPI in Puerto Rican adolescents: Preliminary data on reliability and validity. *Hispanic Journal of Behavioral Sciences*, 6(2), 179-190.
- Dominican Republic. (n.d.). Retrieved July 15th, 2005, from <http://www.infoplease.com/ipa/A0107475.html>
- Dominican Travel Guide. (n.d.). Retrieved July 15th, 2005, from <http://www.webdominicana.com/population-en.html>
- Dodge, K., Pettit, G., & Bates, J. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*, 65(2), 649-665.
- Dressler, W. (1985). Extended family relationships, social support, and mental health in a southern black community. *Journal of Health and Social Behavior*, 26(1), 39-48.

- Duncan, G. (1991). The economic environment of childhood. In A. Huston (Ed.), *Children in poverty: Child development and public policy* (pp. 23-50). New York: Cambridge University Press.
- Duncan, G., Brooks-Gunn, J., & Klebanov, P. (1994). Economic deprivation and early childhood development. *Child Development*, 65(1), 296-318.
- Duncan, G. J., & Magnuson, K. A. (2003). Off with Hollingshead: Socioeconomic Resources, Parenting, and Child Development. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp.83-106). New Jersey, USA: Lawrence Erlbaum Associates.
- Duncan, O. D. (1961). A socioeconomic index for all occupations. In A. L. Reiss, Jr. (Ed.). *Occupations and social status*. New York: The Free Press.
- Eamon, M. K. & Zuehl, R. M. (2001). Maternal Depression and Physical Punishment as Mediators of the Effect of Poverty on Socioemotional Problems of Children in Single-Mother Families. *American Journal of Orthopsychiatry*, 71(2), 218-226.
- Edgerton, M., & Schaefer, E. S. (1977). *Rank Order of Parental Values*. Princeton, NJ: Educational Testing Service.
- Edgerton, M. & Schaefer, E. S. (1985). *Maternal values, socio-economic variables, child competence and adaption*. Unpublished document.
- Eisenberg, N., & Mussen, P. H. (1989). *The roots of prosocial behaviour in children*. New York, USA: Cambridge University Press.
- Elbedour, S., Baker, A., & Charlesworth, W. (1997). The impact of political violence on moral reasoning in children. *Child Abuse & Neglect*, 21(11), 1053-1066.
- Elder, G., Conger, R., Foster, E. (1989). *Families under economic pressure*. Unpublished paper, University of North Carolina, Chapel Hill.
- Evans, G. W. (2004). The Environment of Childhood Poverty. *American Psychologist*, 59(2), 77-92.
- Falicov, C. J. (1998). *Latino families in therapy: A guide to multicultural practice*. New York, NY: Guildford Press.

- Fitzgerald, H. E., Lester, B. M., & Zuckerman, B. (1995). *Children of Poverty: Research, Health, and Policy Issues*. New York: Garland Publishing.
- Ganzeboom, H. B., & Treiman, D. J. (1996). Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations. *Social Science Research*, 25, 201-239.
- Garbarino, J., & Kostelny, K. (1992). Child maltreatment as a community problem. *Child Abuse and Neglect*, 16(4), 455-464.
- García-Coll, C. & Vásquez García, H. A. (1995). Hispanic Children and their Families: On a different track from the very beginning. In H. E. Fitzgerald, B. M. Lester, et al. (Eds.), *Children of poverty: Research, health, and policy issues*. Reference books on family issues. (Vol. 23, pp. 57-83). New York: Garland Publishing.
- Gelles, R. J. (1989). Child abuse and violence in single-parent families: Parent absence and economic deprivation. *American Journal of Orthopsychiatry*, 59(4), 492-501.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 38(5), 581-586.
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire (SDQ). *Journal of the Academy of Child and Adolescent Psychiatry*, 40(11), 1337-1345.
- Goodman, R., & Scott, S. (1999). Comparing the Strengths and Difficulties Questionnaire and the Child Behavior Checklist: Is small beautiful? *Journal of Abnormal Child Psychology*, 27(1), 17-24.
- Goodman, R. Ford, T., Simmons, H., Gatward, R., & Meltzer, H. (2000). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *British Journal of Psychiatry*, 177, 534-539.
- Gottfried, A. W., Gottfried, A. E., Bathurst, K., Wright Guerin, D., & Parramore, M. M. (2003). Socioeconomic Status in Children's Development and Family Environment: Infancy through Adolescence. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp. 189-207). New Jersey, USA: Lawrence Erlbaum Associates.
- Gresham, F. M. & Stuart, D. (1992). Stability of sociometric assessment: implications for uses as selection and outcomes measures in social skills training. *Journal of School Psychology*, 30(3), 223-231.

- Hannan, K., & Luster, T. (1991). Influence of parent, child, and contextual factors on the quality of the home environment. *Infant Mental Health Journal*, 12(1), 17-30.
- Harkness, S. & Super, C. (1992). Parental ethnotheories in action. In I. E. Sigel and A. V. McGillicuddy-DeLisi (Eds.), *Parental beliefs systems: the psychological consequences for children* (2nd ed., pp.373-391). New Jersey, USA: Lawrence Erlbaum Associates.
- Harkness, S. & Super, C. (1995). Culture and parenting. In M. Bornstein (Ed.), *Handbook of Parenting: Biology and ecology of parenting* (Vol. 2, pp. 211-234). New Jersey, USA: Lawrence Erlbaum Associates.
- Harkness, A., Super, C., & Keefer, C. (1992). Learning to be an American parent: How cultural models gain directive force. In R. D'Andrade and C. Strauss (Eds.), *Human motives and cultural models* (pp. 163-178). New York: USA: Cambridge University Press.
- Harter, S. (1985). *Manual for the Self-Perception profile for children*. Denver: University of Denver.
- Hashima, P. Y., & Amato, P. R. (1994). Poverty, social support, and parental behavior. *Child Development*, 65(2), 394-403.
- Hollingstead, A. B. (1975). *The four-factor index of social status*. Unpublished manuscript, Yale University, New Haven, CT.
- Hoff, E. (2003). Causes and Consequences of SES-Related Differences in Parent-to-Child Speech. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp. 147-160). New Jersey, USA: Lawrence Erlbaum Associates.
- Hoff-Ginsberg, E. (1991). Mother-child conversation in different social classes and communicative settings. *Child Development*, 62, 782-796.
- Hoff-Ginsberg, E. & Tardif, T. (1995). Socioeconomic Status and Parenting. In M. Bornstein (Ed.), *Handbook of Parenting: Biology and ecology of parenting* (Vol. 2, pp. 161-188). New Jersey, USA: Lawrence Erlbaum Associates.
- Hoffman, L. W. (1977). Changes in family roles, socialization, and sex differences. *American Psychologist*, 32(8), 644-657.
- Hoffman, L. W. (1987). The Value of Children to Parents and Childbearing Patterns. *Social Behavior*, 2(3), 123-141.

- Hoffman, L. W. (2003). Methodological Issues in Studies of SES, Parenting, and Child Development. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp. 125-143). New Jersey, USA: Lawrence Erlbaum Associates.
- Horwitz, S. M., Bility, K. M., Plichta, S. B., Leaf, P. J., & Haynes, N. (1998). Teacher assessments of children's behavioral disorders: Demographic correlates. *American Journal of Orthopsychiatry*, 68(1), 117-125.
- How many children are poor?* Retrieved April 5th, 1999 from <http://www.ssc.wisc.edu/irp/faq6.htm>
- Ireton, H. (1997). *Child Development Inventories in education and health care: Screening and assessing young children*. Minneapolis, Minnesota: Behavior Science Systems.
- Jencks, C. & Phillips, M. (1998) *The black-white test score gap*. Washington, DC: Brookings.
- Kirk, R. E. (1982). *Experimental Design: Procedures for the behavioral sciences* (2nd ed.). California: Brook/Cole Publishing Company.
- Kirk, R. E., & Natanegara, F. (2001). *Three programs for computing Dunn-Sidak values*. *Psychological Reports*, 88(3, Pt2), 1067-1070.
- Kohn, M. (1969). *Class and Conformity: A study in values*. Homewood, IL: Dorsey Press.
- Kohn, M. (1977). *Class and Conformity: A study of values* (2nd ed.). Chicago, University of Chicago Press.
- Korenman, S., Miller, J., & Sjaastad, J. (1995). Long-term poverty and child development in the United States: Results from the NLSY. *Children and Youth Services Review*, 17(1-2), 127-155.
- Lempers, J., Clark-Lempers, D., & Simons, R. (1989). Economic hardship, parenting, and distress in adolescence. *Child Development*, 60(1), 25-49.
- Leventhal, T., & Brooks-Gunn, J. (2003). Moving on Up: Neighborhood Effects on Children and Families. In M. H. Bornstein and R. H. Bradley (Eds.), *Socioeconomic Status, Parenting, and Child Development* (pp.209-230). New Jersey, USA: Lawrence Erlbaum Associates.
- LeVine, R. A. (1974). Parental goals: A cross-cultural view. *Teachers College Record*, 76(2), 226-239.

- LeVine, R. A. (1974). Parental goals: A cross-cultural view. *Teachers College Record*, 76(2), 226-239.
- LeVine, R. A. (1980). A cross-cultural perspective on parenting. In M. Fantini & R. Cardenes (Eds.), *Parenting in a multicultural society* (pp. 17-26). New York, USA: Longman.
- LeVine, R. A. (1988). Human parental care: Universal goals, cultural strategies, individual behavior. In W. Damon (Ed.), & R. A. Levine, P. M. Miller & M. M. West (Vol. Eds.), *New directions for child development: Parental behaviors in diverse societies* (Vol. 40, pp. 3-11). San Francisco, CA: Jossey-Bass.
- Liem, R., & Liem, J. (1978). Social class and mental illness reconsidered: The role of economic stress and social support. *Journal of Health and Social Behavior*, 19(2), 139-156.
- Luster, T., & Okagaki, L. (1993). Multiple influences on parenting: Ecological and life-course perspectives. In T. Luster & L. Okagaki (Eds.), *Parenting: An ecological perspective* (pp. 227-250). Michigan, USA: Lawrence Erlbaum Associates.
- Luster, T. & Okagaki, L. *Parenting: An ecological perspective*. Michigan, USA: Lawrence Erlbaum Associates.
- Luster, T., Rhoades, K., & Haas, B. (1989). The Relation between Parental Values and Parenting Behavior: A test of the Kohn hypothesis. *Journal of Marriage and the Family*, 51(1), 139-147.
- Magnuson, K. A., & Duncan, G. J. (2002). Parents in Poverty. In M. Bornstein (Ed.), *Handbook of Parenting: Vol. 4 Social Conditions and Applied Parenting* (pp.95-121). New Jersey, USA: Lawrence Erlbaum Associates.
- Marsh, H. W. (1990). *Manual for the self-description questionnaire II*. San Antonio, TX: Psychological Corporation/ Harcourt Brace Javanovich.
- Maslow, A. (1954). *Motivation and Personality*. New York, USA: Harper & Row.
- McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*, 61(2), 311-346.
- McLoyd, V. M. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204.

- McLoyd, V. C., Wilson, L. (1991). The strain of living poor: Parenting, social support, and child mental health. In A. C. Huston (Ed.), *Children in poverty: Child development and public policy* (pp. 105-135). New York, NY: Cambridge University Press.
- Neff, J., & Husaini, B. (1980). Race, socioeconomic status, and psychiatric impairment: A research note. *Journal of Community Psychology*, 8(1), 16-19.
- NICHD Early Child Care Research Network. (2001). *Before Head Start: Income and Ethnicity, Family Characteristics, Child Care Experiences, and Child Development. Early Education and Development*, 12(4), 545-576.
- Oberg, C. N., Bryant, N. A., & Bach, M. L. (1995). A portrait of America's children: The impact of poverty and a call to action. *Journal of Social Distress & the Homeless*, 4(1), 43-56.
- Ogbu, J. V. (1981). Origins of human competence: A cultural-ecological perspective. *Child Development*, 52(2), 413-429.
- Okagaki, L., & Johnson-Divecha, D. (1993). Development of Parental Beliefs. In T. Luster and L. Okagaki (Eds.), *Parenting: An ecological perspective* (pp. 35-67). Michigan, USA: Lawrence Erlbaum Associates.
- Ollendick, T. H., Greene, R. W., Francis, G., & Baum, C. G. (1991). Sociometric status: Its stability and validity among neglected, rejected and popular children. *Journal of Child Psychology and Psychiatry*, 32, 525-534.
- Pachter, L. M., & Harwood, R. L. (1996). Culture and child behavior and psychosocial development. *Developmental and Behavioral Pediatrics*, 17(3), 191-198.
- Perneger, T. V. (1998). What is wrong with Bonferroni adjustments. *British Medical Journal*, 136, 1236-1238.
- Phillips, M., Brooks-Gunn, J., Duncan, G., Klebanov, P. & Crane, J. (1998). Family background, parenting practices, and the black-white test score gap. In C. Jencks and M. Phillips (Eds.), *The black-white test score gap* (pp. 103-144). Washington, DC: Brookings.
- Ramsey, P. G. (1988). Social skills and peer status: A comparison of two socioeconomic groups. *Merrill-Palmer Quarterly*, 34(2), 185-202.
- Reiss, A. L. Jr. (1961). *Occupations and Social Status*. New York: The Free Press.
- Ross, D. (1998). *Child Poverty in Canada: Recasting the issue*. Retrieved May 15th, 1999 from <http://www.ccsd.ca/pubs/recastin.htm>

- Ross, D. & Roberts, P. (1999). Income and Child Well-being: A new perspective on the poverty debate. Retrieved on September 15th, 2004 from <http://www.ccsd.ca/pubs/inckids/index.htm>.
- Santana, I., & Rathe, M. (1993). Reforma Social: Una agenda para combatir la pobreza [Social Reform: An program to fight poverty]. Santo Domingo, Republica Dominica: Ediciones de la Fundacion Siglo 21.
- Schaefer, E., & Edgerton, M. (1985). Parental and child correlates of parental modernity. In I. E. Siegel (Ed.), *Parental belief systems*. Hillsdale, NJ: Erlbaum.
- Serbin, L. A., Lyons, J., Marchessault, K., Schwartzman, A. E., & Ledingham, J. (1987). Observational validation of peer nomination technique for identifying aggressive, withdrawn and aggressive-withdrawn children. *Journal of Consulting and Clinical Psychology*, 55(1), 109-110.
- Siegel, I. E. (1985). *Parental beliefs systems*. Hillsdale, NJ: Erlbaum.
- Siegel, P. M. (1971). Prestige in the American occupational structure. Unpublished manuscript, University of Chicago.
- Sigel, I. & McGillicuddy-DeLisi, A. V. (1992). *Parental beliefs systems: the psychological consequences for children* (2nd ed., pp.373-391). New Jersey, USA: Lawrence Erlbaum Associates.
- SISA. Simple Interactive Statistical Analysis. Retrieved on September 15th, 2004 from <http://home.clara.net/sisa.bonhlp.htm>.
- Smith, J., Brooks-Gunn, J., & Klebanov, P. (1997). Consequences of living in poverty for young children's cognitive and verbal ability and early school achievement. In G. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp.132-189). New York, NY: Russell Sage Foundation.
- Solis, M. L., & Abidin, R. R. (1991). The Spanish Version Parenting Stress Index: A psychometric study. *Journal of Clinical Child Psychology*, 20(4), 372-378.
- Sugland, B. W., Zaslow, M., Smith, J. R., Brooks-Gunn, J., Coates, D., Blumenthal, C., Moore, K. A., Griffin, T., & Bradley, R. (1995). The Early Childhood HOME Inventory and HOME-Short Forms in Differing Racial/Ethnic Groups. *Journal of Family Issues*, 16(5), 632-663.

- Tabachnick, B.G., & Fidell, L. S. (2001). *Using Multivariate Statistics* (4th ed.). Toronto: Allyn and Bacon.
- Terrisse, B., Roberts, D. S. L., Palacio-Quintin, E., & MacDonald, B. E. (1998). Effects of parenting practices and socioeconomic status on child development. *Swiss Journal of Psychology*, 57(2), 114-123.
- Treiman, D. J. (1977). Occupational prestige in comparative perspective. New York: Academic Press.
- Uitenbroek, D. G. (1997). *SISA Binomial*. Southampton: D.G. Uitenbroek. Retrieved September 15th, 2004 from <http://home.clara.net/sisa/binomial.htm>.
- USAID. (1997). *USAID Congressional Presentation FY 1997*. Retrieved on May 10th, 1999 from <http://www.info.usaid.gov/pubs/cp97/countries/do.htm>
- Vargas, T. (1998). *De la casa a la calle: Estudio de la familia y la vecindad en un barrio de Santo Domingo*. Santo Domingo, Republica Dominicana : Editora Buho.
- Wagatsuma, H. (1977). Problems of language in cross-cultural research. *Annals of the New York Academy of Science*, 285, 141-150.
- Weinger, S. (1998). Poor children “know their place”: Perceptions of poverty, class and public messages. *Journal of Sociology & Social Welfare*, 25(2), 100-118.
- White, K. (1982). The relation between socioeconomic status and academic achievement. *Psychological Bulletin*, 91(3), 461-481.
- Williams, B. T. R., & Gilmour, J. D. (1994). Annotation: Sociometry and peer relationships. *Journal of Child Psychology and Psychiatry*, 35(6), 997-1013.
- Wyatt, G. L. (1969). *La relation mère-enfant et l'acquisition du langage*. Belgique : Macmillan Company.
- Yarnold, P. R., & Soltysik, R. C. (2005). *Optimal data analysis: A guidebook with software for windows*. Washington DC, USA: American Psychological Association.

Appendix A

Neighbourhoods to which the Children and Mothers belong

<u>Name of neighbourhood</u>	<u>Frequency</u>	<u>Percentage</u>
La Toma Arriba	18	5%
Toma Abajo	54	15
El Firme	10	2.8
La Pangola	8	2.2
Mucha Agua	33	9.1
Codetel	10	2.8
El 5	4	1.1
Majagual	26	7.2
Arrollo Iguerro	15	4.2
Juan Roman	10	2.8
Lavapie	15	4.2
Kanastica	5	1.4
Madre Vieja Sur	21	5.8
Madre Vieja Norte	9	2.5
San Cristobal	93	25.8
Barrio Salasario	2	0.6
Sector Cunani	6	1.7
Pueblo Nuevo	8	2.2
Barrio Puerto Rico	1	0.3
Las Molinas	1	0.3
La Guandulera	2	0.6
Detras de la Fortaleza	3	0.8
Barrio La Cokera	1	0.3
Barrio El Ceza	1	0.3
Yaguata	1	0.3
Barrio Nueva Esperanza	1	0.3
Las Nova	1	0.3
Campos	1	0.3
Barrio Moncu	1	0.3

N location known=361

N location unknown=14

Campos Area (N=188)

<u>Name of neighbourhood</u>	<u>Frequency</u>	<u>Percentage</u>
La Toma Arriba	18	9.6%
La Toma Abajo	54	28.7
El Firme	10	5.3
La Pangola	8	4.3
Mucha Agua	33	17.6
Codetel	10	5.3
El 5	4	2.1
Majagual	26	13.8
Arrollo Iguerro	15	8
Juan Roman	10	5.3

Entire San Cristobal Area (N=187)

<u>Name of neighbourhood</u>	<u>Frequency</u>	<u>Percentage</u>
Lavapie	15	8.7%
Kanastica	5	2.9
Madre Vieja Sur	21	12.1
Madre Vieja Norte	9	5.2
San Cristobal	93	53.8
Barrio Salasaro	2	1.2
Sector Cunani	6	3.5
Pueblo Nuevo	8	4.6
Barrio Puerto Rico	1	0.6
Las Molinas	1	0.6
La Guandulera	2	1.2
Detras de la Fortaleza	3	1.7
Barrio La Cokera	1	0.6
Barrio El Ceza	1	0.6
Yaguete	1	0.6
Barrio Nueva Esperanza	1	0.6
Las Nova	1	0.6
Campos	1	0.6
Barrio Moncu	1	0.6
Unknown	14	

Appendix B1

House-Material scale

<u>Items</u>	<u>Campos</u> (N=186)	<u>San Cristobal</u> (N=168)
1. <u>Type of home</u>		
- wooden	58.6%	0%
- painted wooden	34.4	12.4
- cement	7.0	18.2
- painted cement	0	58.8
- apartment building	0	10.6
2. <u>Type of floor</u>		
- earth	24.2	0
- cement	75.8	58.2
- tiles/ marble	0	41.2
3. <u>Type of roof</u>		
- metallic sheet, canvas, cardboard, other refuse	54.3	0.5
- straw, cane, plantain/ palm leaves	0	0
- wood, asbestos, fiber-cement	39.9	9.3
- baked clay roof tiles, asphalt, cement, gravel, other durable roof tile	5.9	90.2
4. <u>Material of walls</u>		
- metallic sheet (zinc, other), sticks, refuse	0	0
- cane, palm, mud-straw, leaves, other non-durable plant material	0	0
- wood, uncemented adobe	93.1	9.8
- masonry (brick, cement block, cemented adobe, stone, gravel)	6.9	09.2
5. <u>Access to electricity</u>		
- none	44.6	0
- yes	55.4	100
- electricity generator	0	14.8

6. <u>Access to water</u>	61.8	0
- river	29.6	0
- community shared water tap	5.9	0.6
- private outdoor water tap	2.7	81.2
- indoor water tap	0	17.6
- water reservoir	0	0.6
- water delivered to home by truck		
7. <u>Sewerage</u>		
- no system, other (river, canal, other natural outlet)	10.6%	0%
- black water well, cesspool, latrine, outhouse	88.3	1.0
- piped system (private/public), piped septic tank	1.1	99.0
8. <u>Pipes</u>		
- public fountain, river, canal, water truck, cistern	63.3	0
- well, spring, not piped	1.6	0
- piped to outdoor location from (public/private) aqueduct or other similar system	32.4	1.5
- piped indoor from (public/ private) aqueduct or other similar system	2.7	98.5
9. <u>Type of bathroom facilities</u>		
- none	11.3	0
- outdoors non flushing shared	45.2	0.6
- outdoors non flushing personal	42.5	0
- outdoors flushing shared	0	1.8
- indoors flushing personal	1.1	97.6
10. <u>Type of kitchen in home- cooking facilities</u>		
- over fire	45.2	0
- over fire as well as a propane stove	21.5	0
- propane stove	33.3	28.2
- propane stove and oven	0	71.8
11. <u>Number of bedroom in home</u>		
- one shared	41.4	3.0
- separate bedroom for parents and children	57.5	63.3
- separate bedroom for parents and each child	1.1	33.7
12. <u>Type of furniture in home</u>		
- insufficient	52.2	0
- sufficient	47.8	44.1
- luxurious furniture	0	55.9

13. Washing machine in home

- none	89.2	0.6
- yes	10.8	99.4

14. Telephone in home

- none	99.5	5.8
- yes (one)	0.5	71.3
- multiple	0	22.8

15. Television in home

- none	46.8	0
- yes (one)	53.2	74.7
- multiple	0	25.3

Appendix B2

Neighbourhood scale

Items	<u>Campos</u> (N=186)	<u>San Cristobal</u> (N=167)
<i>Common Resources</i>		
1. <u>Pharmacy</u>	99.5%	8.9%
- no	0.5	91.1
- yes		
2. <u>Medical Clinic</u>	82.3	22.5
- no	17.7	77.5
- yes		
3. <u>Primary School</u>		
- no	37.6	13.0
- yes	62.4	87.0
4. <u>Preschool Program</u>		
- no	86.0	12.8
- yes	14.0	87.2
5. <u>High school</u>		
- no	82.3	16.3
- yes	17.7	83.7
6. <u>Recreational Activities</u>		
- none	98.9	9.4
- some	1.1	42.7
- a lot	0	48.0
7. <u>Playground</u>		
- no	93.5	8.2
- yes	6.5	91.8
8. <u>Employment Opportunities</u>		
- none	1.1	0
- limited	98.9	22.2
- varied	0	77.8

9. Presence of Professionals

- none	30.6	0
- limited presence of professional models	69.4	14.1
- varied sample of professionals in neighbourhood	0	61.8
- most individuals in the neighbourhood are professionals	0	24.1

10. Transportation

- none	4.3%	0%
- limited transportation means	94.6	20.6
- most means of transportation are available	1.1	79.4

11. Stores

- none	0	0
- grocery and basic necessities	98.9	24.0
- variety of stores available	1.1	76.0

*Specialized Resources*12. Private or public schools

- public school only in neighbourhood	100	40.1
- both public and private schools are available	0	59.9

13. Professional Training

- none	98.9	30.2
- yes	1.1	69.8

14. University

- none	100	57.6
- yes	0	42.4

15. Library

- none	98.9	36.3
- yes	1.1	63.7

16. Religious Institutions

- none	12.4	0
- one church in neighborhood	87.6	34.5
- churches of many denominations in neighborhood	0	65.5

17. Sunday School- Bible School

- none	79.0	26.3
- yes	21.0	73.7

18. Police Station

- none	100	42.7
- yes	0	57.3

19. Fire Station

- none	100	43.3
- yes	0	56.7

Appendix B3

Educational Opportunity scale

<u>Items</u>	<u>Campos</u> (N=186)	<u>San Cristobal</u> (N=167)
<i>School Characteristics</i>		
1. <u>Type of school child is attending</u>		
- does not attend school	38.4%	1.3%
- public school	56.8	0
- semi-private school	2.7	36.0
- private school	2.2	62.7
2. <u>Transportation to go to school</u>		
- none	92.2	0
- transportation available	7.8	100
3. <u>Electricity in school</u>		
- none	83.3	0
- available	15.0	60.1
- electricity generator in school	0	39.9
4. <u>School Supplies available</u>		
- no school material available	79.2	0
- some school material available	20.8	39.9
- a lot of varied material available	0	60.1
5. <u>Physical Education and Art Classes</u>		
- no programs available	59.2	0
- programs available	40.8	21.7
- elaborate programs available	0	78.3
6. <u>Psychological and Special Education Services</u>		
- no programs available	87.5	0
- programs available	12.5	61.6
- elaborate programs available	0	38.

*Parental Characteristics*7. Maternal Employment

- unemployed/ homemaker	82.8	24.7
- part-time employment	9.1	18.5
- full-time employment	8.1	56.8

8. Maternal Occupational Status

	82.2%	22.4%
- homemaker	7.0	3.1
- low level blue collar work	4.9	13.7
- high level blue collar work	4.9	52.2
- professional employment	1.1	8.7
- high level professional employment		

9. Paternal Occupational Status

- low level blue collar work	40.8	3.2
- high level blue collar work	55.6	22.1
- professional employment	3.6	52.6
- high level professional employment	0	22.1

10. Maternal Education

- none	14.5	0
- beginning of primary school (1-4)	36.0	1.2
- middle to end of primary school (5-8)	32.8	3.7
- high school (9-12)	9.1	14.8
- professional training	5.4	14.2
- university	2.2	61.7
- master and doctoral level studies	0	4.3

11. Paternal Education

- none	11.0	0
- beginning of primary school (1-4)	35.5	0
- middle to end of primary school (5-8)	37.8	6.4
- high school (9-12)	12.2	19.2
- professional training	0.6	18.6
- university	2.9	52.6
- master and doctoral level studies	0	3.2

12. Maternal Literacy

- illiterate	21.0	0.5
- functionally literate	38.2	0
- literate	40.9	99.5

13. Paternal Literacy

- illiterate	14.6	0
- functionally literate	40.4	0
- literate	45.0	100

Appendix D1

Housing Quality scale (alpha=.86)

<u>Items</u>	<u>Corrected Item Total Correlation</u>	<u>Loading of Items on the Housing Quality Factor</u>
Wall	.84	.88
Floor	.50	.60
Roof	.84	.91
Electricity	.67	.75
Sewerage	.88	.92
Pipe	.86	.92

Appendix D2

House-Material Quality scale: (alpha=.96)

<u>Items</u>	<u>Corrected Item Total Correlation</u>	<u>Loading on Factor</u>
Type of home	.89	.91
Type of floor in the home	.72	.75
Access to water	.93	.95
Type of bathroom facilities	.92	.93
Electricity in home	.70	.72
Radio in home	.64*	
Television in home	.71	.75
Telephone in home	.83	.87
Washing machine in home	.87	.88
Type of kitchen in home-cooking facilities	.87	.89
Type of furniture available in home	.86	.88
Number of bedrooms in home	.67	.71
Wall (HQS)	.86	.88
Floor (HQS)	.52*	
Roof (HQS)	.84	.85
Electricity (HQS)	.66*	
Sewerage (HQS)	.91	.91
Pipe (HQS)	.89	.90

* *Item deleted*

Appendix E1

Neighbourhood scale: (alpha=.97)

<u>Items</u>	<u>Corrected Item Total Correlation</u>
Pharmacy in neighbourhood	.89
Medical clinic in neighbourhood	.75
Primary school in neighbourhood	.42
Private or public schools available in the neighbourhood	.87
Preschool program available in neighbourhood	.80
High school in neighbourhood	.78
Professional training institution in neighbourhood	.92
University in neighbourhood	.69
Library in neighbourhood	.87
Recreational activities available to children	.91
Playground in neighbourhood	.81
Religious institutions in neighbourhood	.86
Sunday school-bible teaching for children	.71
Employment opportunities in neighbourhood	.93
Presence of professional models in neighbourhood	.81
Transportation available in neighbourhood	.87
Stores available in neighbourhood	.94
Police station in neighbourhood	.85
Fire station in neighbourhood	.85

(19 items)

Appendix E2

Dimensions of the Neighbourhood scale

<u>Common Resources Dimension</u> (Health and Educational Institutions)	<u>Loading on the factor</u>
Pharmacy	.85
Medical Clinic	.63
Primary School	.37
Preschool Program	.82
High school	.80
Recreational activities	.74
Playground	.78
Employment opportunities	.74
Presence of professional models	.82
Transportation	.69
Stores	.72

<u>Specialized Resources Dimension</u> (Cultural and Professional Development Institutions)	<u>Loading on factor</u>
Private or public schools	.86
Professional training	.69
University	.71
Library	.75
Religious institutions	.68
Sunday school	.63
Police station	.89
Fire station	.90

Appendix F

Educational Opportunity scale (alpha=.94)

Items	Corrected Item Total Correlation	Loading on Factor
School attendance	.15*	
Type of school the child is attending	.77	.91
Extracurricular activities in which child enrolled	.46*	
Maternal Employment	.59	.71
Paternal Employment	.07*	
Maternal Occupational Status	.61	.75
Paternal Occupational Status	.66	.79
Maternal Education	.73	.90
Paternal Education	.69	.86
Maternal Literacy	.62	.74
Paternal Literacy	.59	.70
Location of school that child attends	-.32*	
Distance between child's home and school	-.16*	
Transportation to go to school	.80	.90
Number of students per classroom	.59*	
Electricity	.86	.87
School supplies	.75	.89
Physical education and art classes	.82	.86
Psychological and special education services	.70	.72
One grade per classroom	.11*	

* *Item deleted*

Appendix G1

Parenting Stress Index-Short Form (alpha=.90)Parenting Distress scale (alpha= .82)

I often have the feeling that I cannot handle things very well. (corrected item total correlation= .56)

I find myself giving up more of my life to meet my children's needs than I ever expected. (.55)

I feel trapped by my responsibilities as a parent. (.59)

Since having this child, I have been unable to do new and different things. (.49)

Since having a child, I feel that I am almost never able to do things that I like to do. (.55)

I am unhappy with the last purchase of clothing I made for myself. (.52)

There are quite a few things that bother me about my life. (.41)

Having a child has caused more problems than I expected in my relationship with my spouse (male/female friend). (.39)

I feel alone and without friends. (.38)

When I go to a party, I usually expect not to enjoy myself. (.45)

I am not interested in people as I used to be. (.50)

I don't enjoy things as I used to. (.37)

Parent-Child Dysfunctional scale (alpha= .83)

My child rarely does things for me that make me feel good. (corrected item total correlation= .52)

Most times I feel that my child does not like me and does not want to be close to me. (.56)

My child smiles at me much less than I expected. (.57)

When I do things for my child, I get the feeling that my efforts are not appreciated very much. (.62)

When playing, my child doesn't often giggle or laugh. (.54)

My child doesn't seem to learn as quickly as most children. (.37)*

My child doesn't seem to smile as much as most children. (.53)

My child is not able to do as much as I expected. (.57)

It takes a long time and it is very hard for my child to get used to new things. (.32)*

For the next statement, choose your response from the choices A1 to A5 below. (.26)*

- | | |
|-------------------|--|
| I feel that I am: | 1. not very good at being a parent. |
| | 2. a person who has some trouble being a parent. |
| | 3. an average parent. |
| | 4. a better than average parent. |
| | 5. a very good parent. |

I expected to have closer and warmer feelings for my child than I do and this bothers me. (.57)

Sometimes my child does things that bother me just to be mean. (.33)*

Difficult Child scale (alpha= .80)

My child seems to cry or fuss more often than most children. (corrected item total correlation=.46)

My child generally wakes up in a bad mood. (.41)

I feel that my child is very moody and easily upset. (.55)

My child does a few things which bother me a great deal. (.55)

My child reacts very strongly when something happens that my child doesn't like. (.48)

My child gets upset easily over the smallest thing. (.46)

My child's sleeping or eating schedule was much harder to establish than I expected. (.22) *

For the next statement, choose your response from the choices 1 to 5 below. (.41)

I have found that getting my child to do something or stop doing something is:

1. much harder than I expected
2. somewhat harder than I expected.
3. about as hard as I expected.
4. somewhat easier than I expected.
5. much easier than I expected.

For the next statement, choose your response from the choices 10+ to 1-3.

Think carefully and count the number of things which your child does that bother you.

(.05) *

10+

8-9

6-7

4-5

1-3

There are some things my child does that really bother me a lot. (.54)

My child turned out to be more of a problem than I had expected. (.40)

My child makes more demands on me than most children. (.35)

Total Stress scale (alpha= .90)Items:

I often have the feeling that I cannot handle things very well. (corrected item total correlation=.49)

I find myself giving up more of my life to meet my children's needs than I ever expected. (.50)

I feel trapped by my responsibilities as a parent. (.49)

Since having this child, I have been unable to do new and different things. (.41)

Since having a child, I feel that I am almost never able to do things that I like to do. (.42)

I am unhappy with the last purchase of clothing I made for myself. (.48)

There are quite a few things that bother me about my life. (.37)

Having a child has caused more problems than I expected in my relationship with my spouse (male/female friend). (.43)

I feel alone and without friends. (.38)

When I go to a party, I usually expect not to enjoy myself. (.45)

I am not interested in people as I used to be. (.42)

I don't enjoy things as I used to. (.37)

My child rarely does things for me that make me feel good. (.54)

Most times I feel that my child does not like me and does not want to be close to me. (.48)

My child smiles at me much less than I expected. (.48)

When I do things for my child, I get the feeling that my efforts are not appreciated very much. (.61)

When playing, my child doesn't often giggle or laugh. (.44)

My child doesn't seem to learn as quickly as most children. (.30)

My child doesn't seem to smile as much as most children. (.45)

My child is not able to do as much as I expected. (.53)

It takes a long time and it is very hard for my child to get used to new things. (.31)

For the next statement, choose your response from the choices 1 to 5 below. (.37)

- I feel that I am:
1. not very good at being a parent.
 2. a person who has some trouble being a parent.
 3. an average parent.
 4. a better than average parent.
 5. a very good parent.

I expected to have closer and warmer feelings for my child than I do and this bothers me. (.60)

Sometimes my child does things that bother me just to be mean. (.42)

My child seems to cry or fuss more often than most children. (.43)

My child generally wakes up in a bad mood. (.44)

I feel that my child is very moody and easily upset. (.44)

My child does a few things which bother me a great deal. (.45)

My child reacts very strongly when something happens that my child doesn't like. (.40)

My child gets upset easily over the smallest thing. (.40)

My child's sleeping or eating schedule was much harder to establish than I expected. (.39)

For the next statement, choose your response from the choices 1 to 5 below. (.44)

- I have found that getting my child to do something or stop doing something is:
1. much harder than I expected
 2. somewhat harder than I expected.
 3. about as hard as I expected.
 4. somewhat easier than I expected.
 5. much easier than I expected

For the next statement, choose your response from the choices 10+ to 1-3.

Think carefully and count the number of things which your child does that bother you.

(-.09) *

10+

8-9

6-7

4-5

1-3

There are some things my child does that really bother me a lot. (.57)

My child turned out to be more of a problem than I had expected. (.48)

My child makes more demands on me than most children. (.33)

* *Item deleted*

Appendix G2

Factor Structure: Parenting Stress Index- Short-Form

<u>Factor 1</u> : Parenting Distress Dimension	Loading on Factor
1. I often have the feeling that I cannot handle things very well.	.79
2. I find myself giving up more of my life to meet my children's needs than I ever expected.	.71
3. I feel trapped by my responsibilities as a parent.	.63
4. Since having this child, I have been unable to do new and different things.	.35
5. Since having a child, I feel that I am almost never able to do things that I like to do.	.50
6. I am unhappy with the last purchase of clothing I made for myself.	.50
7. There are quite a few things that bother me about my life.	.32
11. I am not interested in people as I used to be.	.44
12. I don't enjoy things as I used to.	.26
22. For the next statement, choose your response from the choices 1 to 5 below.	.52
I feel that I am:	
1. not very good at being a parent.	
2. a person who has some trouble being a parent.	
3. an average parent.	
4. a better than average parent.	
5. a very good parent.	
23. I expected to have a closer and warmer feelings for my child than I do and this bothers me.	.46
31. My child's sleeping or eating schedule was much harder to establish than I expected.	.53
33. For the next statement, choose your response from the choices 10+ to 1-3. Think carefully and count the number of things which your child does that bother you.	-.29
10+	
8-9	
6-7	
4-5	
1-3	
35. My child turned out to be more of a problem than I had expected.	.35

Factor 2: Parent-Child Dysfunctional Dimension

<i>8. Having a child has caused more problems than I expected in my relationship with my spouse (male/female friend).</i>	.30
<i>9. I feel alone and without friends.</i>	.37
<i>10. When I go to a party, I usually expect not to enjoy myself.</i>	.41
13. My child rarely does things for me that make me feel good.	.42
14. Most times I feel that my child does not like me and does not want to be close to me.	.60
15. My child smiles at me much less than I expected.	.64
16. When I do things for my child, I get the feeling that my efforts are not appreciated very much.	.57
17. When playing, my child doesn't often giggle or laugh.	.67
18. My child doesn't seem to learn as quickly as most children.	.32
19. My child doesn't seem to smile as much as most children.	.63
20. My child is not able to do as much as I expected.	.40
21. It takes a long time and it is very hard for my child to get used to new things.	.37

Factor 3: Difficult Child Dimension

<i>24. Sometimes my child does things that bother me just to be mean.</i>	.50
25. My child seems to cry or fuss more often than most children.	.47
26. My child generally wakes up in a bad mood.	.35
27. I feel that my child is very moody and easily upset.	.60
28. My child does a few things which bother me a great deal.	.64
29. My child reacts very strongly when something happens that my child doesn't like.	.57
30. My child gets upset easily over the smallest thing.	.51
32. For the next statement, choose your response from the choices 1 to 5 below.	.44
I have found that getting my child to do something or stop doing something is:	
1. much harder than I expected	
2. somewhat harder than I expected.	
3. about as hard as I expected.	
4. somewhat easier than I expected.	
5. much easier than I expected.	
34. There are some things my child does that really bother me a lot.	.57
36. My child makes more demands on me than most children.	.31

Items in italic theoretically belong to another factor

Appendix H2

Factor Analysis Results: Brief Symptom Inventory (BSI)

<u>Factor 1: Somatization Factor</u>		Loading on Factor
2	Faintness or dizziness	.66
7	Pains in heart or chest	.74
23	Nausea or upset stomach	.68
29	Trouble getting your breath	.60
30	Hot or cold spells	.63
33	Numbness or tingling in parts of your body	.52
12	<i>Suddenly scared for no reason</i>	.57
38	<i>Feeling tense or keyed up</i>	.34
<u>Factor 2:- Obsessive Compulsive Factor</u>		
5	Trouble remembering things	.69
26	Having to check and double-check what you do	.71
27	Difficulty making decisions	.75
36	Trouble concentrating	.60
<u>Factor 3: - Depression- sad feelings</u>		
16	Feeling lonely	.79
17	Feeling blue	.61
14	<i>Feeling lonely even when you are with other people</i>	.78
15	<i>Feeling blocked in getting things done</i>	.37
<u>Factor 4: - Depression- Negative view of self and future</u>		
35	Feeling hopeless about the future	.63
50	Feelings of worthlessness	.63
3	<i>The idea that someone else can control your thoughts</i>	.47
22	<i>Feeling inferior to others</i>	.68
32	<i>Your mind going blank</i>	.42
<u>Factor 5: Anxiety- Fearfulness</u>		
19	Feeling fearful	.68
45	Spells of terror or panic	.58
47	Feeling nervous when you are left alone	.65
20	<i>Your feelings being easily hurt</i>	.39

Loading on Factor

Factor 6:- Anxiety- Nervous energy

1	Nervousness or shakiness inside	.48
49	Feeling so restless you can't sit still	.59
34	<i>The idea that you should be punished for your sins</i>	.49
42	<i>Feeling very self-conscious with others</i>	.38

Factor 7:- Hostility- Hurt others and break something

40	Having urges to beat, injure, or harm someone	.70
41	Having urges to break or smash things	.62
8	<i>Feeling afraid in open spaces or on the streets</i>	.42
9	<i>Thoughts of ending your life</i>	.61

Factor 8:- Hostility- Annoyance and Outburst

6	Feeling easily annoyed or irritated	.65
13	Temper outbursts that you could not control	.75

Factor 9:- Hostility- Arguments

46	Getting into frequent arguments	.73
----	---------------------------------	-----

Factor 10:- Paranoid Ideation

4	Feeling others are to blame for most of your troubles	.63
10	Feeling that most people cannot be trusted	.57
51	Feeling that people will take advantage of you if you let them.	.55
18	<i>Feeling no interest in things</i>	.37

Groupings of items belonging to other scales:Factor 11:

31	Having to avoid certain things, places, or activities because they frighten you.	.55
43	Feeling uneasy in crowds, such as shopping or at a movie	.73
53	The idea that something is wrong with your mind	.43

Loading on Factor

Factor 12:

37	Feeling weak in parts of your body	.44
44	Never feeling close to another person	.44
48	Others not giving you proper credit for your achievements	.68

Factor 13:

21	Feeling that people are unfriendly or dislike you.	.37
24	Feeling that you are watched or talked about by others	.55
28	Feeling afraid to travel on buses, subways, or trains.	.71

Items in italic belong to other symptom dimensions

Appendix I1

Interpersonal Support Evaluation List (ISEL)Interpersonal Support Evaluation List Total scale (alpha=.81)

1. There is at least one person I know whose advice I really trust. (.21)
2. There is really no one I can trust to give me good financial advice. (.35)
3. There is really no one who can give me objective feedback about how I'm handling my problems. (.38)
4. When I need suggestions for how to deal with a personal problem I know there is someone I can turn to. (.37)
5. There is someone who I feel comfortable going to for advice about sexual problems. (.28)
6. There is someone I can turn to for advice about handling hassles over household responsibilities. (.26)
7. I feel that there is no one with whom I can share my most private worries and fears. (.36)
8. If a family crisis arose a few of my friends would be able to give me good advice about handling it. (.23)
9. There are very few people I trust to help solve my problems. (.30)
10. There is someone I could turn to for advice about changing my job or finding a new one. (.39)
1. If I decided on a Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me. (.21)
2. No one I know would throw a birthday party for me. (.19)*
3. There are several different people with whom I enjoy spending time. (.31)
4. I don't often get invited to do things with others. (.30)
5. If I wanted to have lunch with someone, I could easily find someone to join me. (.38)
6. Most people I know don't enjoy the same things that I do. (.24)
7. When I feel lonely, there are several people I could call and talk to. (.36)
8. I regularly meet or talk with members of my family or friends. (.24)
9. I feel that I'm on the fringe in my circle of friends. (.26)
10. If I wanted to go out of town (e.g., to the coast) for the day I would have a hard time finding someone to go with me. (.33)
1. If for some reason I were to put in jail, there is someone I could call who would bail me out. (.26)
2. If I had to go out of town for a few weeks, someone I know would look after my home (the plants, pets, yard, etc.). (.44)
3. If I were sick and needed someone to drive me to the doctor, I would have trouble finding someone. (.33)
4. There is no one I could call on if I needed to borrow a car for a few hours. (.22)*
5. If I needed a quick emergency loan of \$100, there is someone I could get it from. (.49)

6. If I needed some help in moving to a new home, I would have a hard time finding someone to help me. (.26)
7. If I were sick, there would be almost no one I could find to help me with my daily chores. (.42)
8. If I got stranded 10 miles out of town, there is someone I could call to come get me. (.39)
9. If I had to mail an important letter at the post office by 5:00 and couldn't make it, there is someone who could do it for me. (.33)
10. If I needed a ride to the airport very early in the morning, I would have a hard time finding anyone to take me. (.31)
1. In general, people don't have much confidence in me. (.29)
2. I have someone who takes pride in my accomplishments. (.35)
3. Most of my friends are more successful at making changes in their private lives than I am. (.27)
4. Most people I know think highly of me. (-.15) *
5. Most of my friends are more interesting than I am. (.24)
6. I am more satisfied with my life than most people are with theirs. (.07)*
7. I have a hard time keeping pace with my friends. (.28)
8. I think that my friends feel that I'm not very good at helping them solve problems. (.21)
9. I am closer to my friends than most other people. (.20)*
10. I am able to do things as well as most other people. (.30)

Appraisal (alpha=.68)

1. There is at least one person I know whose advice I really trust. (.25)
2. There is really no one I can trust to give me good financial advice. (.37)
3. There is really no one who can give me objective feedback about how I'm handling my problems. (.35)
4. When I need suggestions for how to deal with a personal problem I know there is someone I can turn to. (.29)
5. There is someone who I feel comfortable going to for advice about sexual problems. (.37)
6. There is someone I can turn to for advice about handling hassles over household responsibilities. (.36)
7. I feel that there is no one with whom I can share my most private worries and fears. (.44)
8. If a family crisis arose a few of my friends would be able to give me good advice about handling it. (.32)
9. There are very few people I trust to help solve my problems. (.44)
10. There is someone I could turn to for advice about changing my job or finding a new one. (.32)

Belonging (alpha=.57)

1. If I decided on a Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me. (.18)
2. No one I know would throw a birthday party for me. (.10)*

3. There are several different people with whom I enjoy spending time. (.22)
4. I don't often get invited to do things with others. (.27)
5. If I wanted to have lunch with someone, I could easily find someone to join me. (.35)
6. Most people I know don't enjoy the same things that I do. (.29)
7. When I feel lonely, there are several people I could call and talk to. (.24)
8. I regularly meet or talk with members of my family or friends. (.15)
9. I feel that I'm on the fringe in my circle of friends. (.31)
10. If I wanted to go out of town (e.g., to the coast) for the day I would have a hard time finding someone to go with me. (.30)

Tangible (alpha=.66)

1. If for some reason I were to put in jail, there is someone I could call who would bail me out. (.26)
2. If I had to go out of town for a few weeks, someone I know would look after my home (the plants, pets, yard, etc.). (.45)
3. If I were sick and needed someone to drive me to the doctor, I would have trouble finding someone. (.39)
4. There is no one I could call on if I needed to borrow a car for a few hours. (.26)*
5. If I needed a quick emergency loan of \$100, there is someone I could get it from. (.44)
6. If I needed some help in moving to a new home, I would have a hard time finding someone to help me. (.35)
7. If I were sick, there would be almost no one I could find to help me with my daily chores. (.43)
8. If I got stranded 10 miles out of town, there is someone I could call to come get me. (.40)
9. If I had to mail an important letter at the post office by 5:00 and couldn't make it, there is someone who could do it for me. (.23)
10. If I needed a ride to the airport very early in the morning, I would have a hard time finding anyone to take me. (.25)

Self-esteem (alpha= .55)

1. In general, people don't have much confidence in me. (.16)
2. I have someone who takes pride in my accomplishments. (.29)
3. Most of my friends are more successful at making changes in their private lives than I am. (.18)
4. Most people I know think highly of me. (-.24)*
5. Most of my friends are more interesting than I am. (.33)
6. I am more satisfied with my life than most people are with theirs. (.17)
7. I have a hard time keeping pace with my friends. (.26)
8. I think that my friends feel that I'm not very good at helping them solve problems. (.22)
9. I am closer to my friends than most other people. (.18)
10. I am able to do things as well as most other people. (.32)

* *Item deleted*

Appendix I2

Factor Structure: Interpersonal Support Evaluation List (ISEL)

<u>Factor 1- Self-esteem factor</u>	<u>Loading on factor</u>
<i>8. I regularly meet or talk with members of my family or friends.</i>	.58
<i>1. If for some reason I were to put in jail, there is someone I could call who would bail me out.</i>	.60
<i>5. If I needed a quick emergency loan of \$100, there is someone I could get it from.</i>	.47
<i>8. If I got stranded 10 miles out of town, there is someone I could call to come get me.</i>	.57
<i>9. If I had to mail an important letter at the post office by 5:00 and couldn't make it, there is someone who could do it for me.</i>	.53
<i>2. I have someone who takes pride in my accomplishments.</i>	.56
<i>5. Most of my friends are more interesting than I am.</i>	.58
<i>6. I am more satisfied with my life than most people are with theirs.</i>	.42
<i>8. I think that my friends feel that I am not very good at helping them solve problems.</i>	.42
<i>9. I am closer to my friends than most other people.</i>	.30
<i>10. I am able to do things as well as most other people.</i>	.51
 <u>Factor 2- Appraisal factor</u>	
<i>1. There is at least one person I know whose advice I really trust.</i>	.29
<i>3. There is really no one who can give me objective feedback about how I am handling my problems.</i>	.34
<i>4. When I need suggestions for how to deal with a personal problem I know there is someone I can turn to.</i>	.43
<i>5. There is someone who I feel comfortable going to for advice about sexual problems.</i>	.58
<i>6. There is someone I can turn to for advice about handling hassles over household responsibilities.</i>	.59
<i>7. I feel that there is no one with whom I can share my most private worries and fears.</i>	.57
<i>8. If a family crisis arose a few of my friends would be able to give me good advice about handling it.</i>	.46
<i>9. There are very few people I trust to help solve my problems.</i>	.56
<i>10. There is someone I could turn to for advice about changing my job or finding a new one.</i>	.39
<i>3. There are several different people with whom I enjoy spending time.</i>	.34

	<u>Loading on factor</u>
<i>7. When I feel lonely, there are several people I could call and talk to.</i>	.49
<i>7. If I were sick, there would be almost no one I could find to help me with my daily chores.</i>	.34
 <u>Factor 3- Belonging factor</u>	
<i>2. There is really no one I can trust to give me good financial advice.</i>	.34
<i>4. I don't often get invited to do things with others.</i>	.47
<i>5. If I wanted to have lunch with someone, I could easily find someone to join me.</i>	.39
<i>6. Most people I know don't enjoy the same things that I do.</i>	.52
<i>9. I feel that I'm on the fringe in my circle of friends.</i>	.59
<i>10. If I wanted to go out of town (e.g., to the coast) for the day I would have a hard time finding someone to go with me.</i>	.47
<i>3. If I were sick and needed someone to drive me to the doctor, I would have trouble finding someone.</i>	.35
<i>1. In general, people don't have much confidence in me.</i>	.49
<i>7. I have a hard time keeping pace with my friends.</i>	.54
 <u>Factor 4- Tangible factor</u>	
<i>1. If I decided on a Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me.</i>	.37
<i>2. No one I know would throw a birthday party for me.</i>	.56
<i>2. If I had to go out of town for a few weeks, someone I know would look after my home (the plants, pets, yard, etc.).</i>	.51
<i>4. There is no one I could call on if I needed to borrow a car for a few hours.</i>	.53
<i>6. If I needed some help in moving to a new home, I would have a hard time finding someone to help me.</i>	.43
<i>10. If I needed a ride to the airport very early in the morning, I would have a hard time finding anyone to take me.</i>	.32
<i>3. Most of my friends are more successful at making changes in their private lives than I am.</i>	.42
<i>4. Most people I know think highly of me.</i>	.54

Items in italic theoretically belong to other social support dimensions

Appendix J1

HOME Inventory: Infant/ Toddler VersionHOME Total scale (alpha= .92)I. Responsivity (alpha= .73)

1. Parent spontaneously vocalizes to child at least twice.
2. Parent responds verbally to child's vocalizations or verbalizations.
3. Parent tells child name of object or person during visit.
4. Parent's speech is distinct, clear and audible.
5. Parent initiates verbal interchanges with Visitor.
6. Parent converses freely and easily.
7. Parent permits child to engage in messy play.
8. Parent spontaneously praises child at least twice.
9. Parent's voice conveys positive feelings toward child.
10. Parent caresses or kisses child at least once.
11. Parent responds positively to praise of child offered by Visitor.

II. Acceptance (alpha= .66)

12. Parent does not shout at child.
13. Parent does not express overt annoyance with or hostility to child.
14. Parent neither slaps nor spansks child during visit.
15. No more than 1 instance of physical punishment during past week.
16. Parent does not scold or criticize child during visit.
17. Parent does not interfere with or restrict child 3 times during visit.
18. At least 10 books are present and visible.
19. Family has a pet.

III. Organization (alpha= .65)

20. Child care, if used, is provided by one of three regular substitutes.
21. Child is taken to grocery store at least once a week.
22. Child gets out of house at least 4 times a week.
23. Child is taken regularly to doctor's office or clinic.
24. Child has a special place for toys and treasures.
25. Child's play environment is safe.

IV. Learning Materials (alpha= .90)

- 26. Muscle activity toys or equipment.
- 27. Push or pull toys.
- 28. Stroller or walker, kiddie car, scooter, or tricycle.
- 29. Parent provides toys for child to play with during visit.
- 30. Cuddly toy or role-playing toys.
- 31. Learning facilitators- mobile, table and chair, high chair, play pen.
- 32. Simple eye-hand coordination toys.
- 33. Complex eye-hand coordination toys.
- 34. Toys for literature and music.

V. Involvement (alpha= .69)

- 35. Parent keeps child in visual range, looks at often.
- 36. Parent talks to child while doing household work.
- 37. Parent consciously encourages developmental advances.
- 38. Parent invests maturing toys that challenge child to develop new skills.
- 39. Parent structures child's play periods.
- 40. Parent provides toys that challenge child to develop new skills.

VI. Variety (alpha= .54)

- 41. Father provides some daily care.
- 42. Parent reads stories to child at least 3 times weekly.
- 43. Child eats at least one meal a day with mother and father.
- 44. Family visits relatives or receives visits once a month or so.
- 45. Child has 3 or more books of his/her own.

Appendix J2

HOME Inventory: Early Childhood VersionHOME Total scale (alpha= .94)I. Learning Materials (alpha= .88)

1. Child has toys which teach colours, sizes, and shapes.
2. Child has three or more puzzles.
3. Child has record player or tape recorder and at least 5 children's records or tapes.
4. Child has toys or games permitting free expression.
5. Child has toys or games requiring refined movements.
6. Child has toys or games which help teach numbers.
7. Child has at least 10 children's books.
8. At least 10 books visible in the apartment or home.
9. Family buys and reads a daily newspaper.
10. Family subscribes to at least one magazine.
11. Child is encouraged to learn shapes.

II. Language Stimulation (alpha= .70)

12. Child has toys that help teach the names of animals.
13. Child is encouraged to learn the alphabet.
14. Parent teaches child simple verbal manners (please, thank you, sorry).
15. Parent uses correct grammar and pronunciation.
16. Parent encourages child to talk and takes time to listen.
17. Parent's voice conveys positive feelings about child.
18. Child is permitted choice in breakfast or lunch menu.

III. Physical Environment (alpha= .78)

19. Building appears safe and free of hazards.
20. Outside play environment appears safe.
21. Interior of apartment is not dark or perceptually monotonous.
22. Neighbourhood is aesthetically pleasing.
23. House has 100 square feet of living space per person.
24. Rooms are not overcrowded with furniture.
25. House is reasonably clean and minimally cluttered.

IV. Responsivity (alpha= .66)

- 26. Parent holds child close 10-15 minutes per day.
- 27. Parent converses with child at least twice during visit.
- 28. Parent answers child's questions or requests verbally.
- 29. Parent usually responds verbally to child's speech.
- 30. Parent praises child's qualities twice during visit.
- 31. Parent caresses, kisses, or cuddles child during visit.
- 32. Parent helps child demonstrate some achievement during visit.

V. Academic Stimulation (alpha= .83)

- 33. Child is encouraged to learn colors.
- 34. Child is encouraged to learn patterned speech.
- 35. Child is encouraged to learn spatial relationships.
- 36. Child is encouraged to learn numbers.
- 37. Child is encouraged to read a few words.

VI. Modeling (alpha= .26)

- 38. Some delay of food gratification is expected.
- 39. TV is used judiciously.
- 40. Parent introduces Visitor to child.
- 41. Child can express negative feelings without harsh reprisal.
- 42. Child can hit parent without harsh reprisal.

VII. Variety (alpha= .69)

- 43. Child has real or toy musical instrument.
- 44. Child is taken on outing by a family member at least every other week.
- 45. Child has been on trip more than 50 miles during last year.
- 46. Child has been taken to a museum during past year.
- 47. Parent has encouraged child to put away toys without help.
- 48. Parent uses complex sentence structure and vocabulary.
- 49. Child's art work is displayed some place in house.
- 50. Child eats at least one meal per day with mother (or mother figure) and father (or father figure).
- 51. Parent lets child choose certain favorite food products or brands at grocery store.

VIII. Acceptance (alpha= .49)

- 52. Parent does not scold or yell at or derogate child more than once.
- 53. Parent does not use physical restraint during visit.
- 54. Parent neither slaps nor spansks child during visit.
- 55. No more than one instance of physical punishment occurred during the past week.

Appendix J3

HOME Inventory: Middle Childhood VersionHOME Total scale (alpha= .91)I. Responsivity (alpha= .72)

1. Family has fairly regular & predictable daily schedule for child (meals, day care, bedtime, TV, homework, etc).
2. Parent sometimes yields to child's fears or rituals (allows night light, accompanies child to new experiences, etc).
3. Child has been praised at least twice during past week for doing something.
4. Child is encouraged to read on his own.
5. Parent encourages child to contribute to the conversation during the visit.
6. Parent shows some positive emotional responses to praise of child by Visitor.
7. Parent responds to child's questions during visit.
8. Parent uses complete sentence structure and some long words in conversing.
9. When speaking of or to child, parent's voice conveys positive feelings.
10. Parent initiates verbal interchanges with Visitor, asks questions, and makes spontaneous comments.

II. Encouragement of Maturity (alpha= .39)

11. Family requires child to carry out certain self-care routines, e.g., makes bed, cleans room, cleans up after spills, and bathes self. (A YES requires 3 out of 4).
12. Family requires child to keep living and play area reasonably clean and straight.
13. Child puts own outdoor clothing, dirty clothes, and night clothes in special place.
14. Parents set limits for child and generally enforce them (curfew, homework before TV, or other regulations that fit family pattern).
15. Parent introduces Visitor to child.
16. Parent is consistent in applying family rules.
17. Parent does not violate rules of common courtesy during visit.

III. Acceptance (alpha= .66)

18. Parent has not lost temper with child more than once during previous week.
19. Parent reports no more than one instance of physical punishment occurred during past month.
20. Child can express negative feelings toward parents without harsh reprisals.

21. Parent has not cried or been visibly upset in child's presence more than once during past week.
22. Child has a special place in which to keep own possessions.
23. Parent talks to child during visit (beyond correction and introduction).
24. Parent uses some term of endearment or some diminutive for child's name when talking about child at least twice during visit.
25. Parent does not express overt annoyance with or hostility toward child- complains, describes child as bad, says child won't mind, etc.

IV. Learning Materials (alpha= .72)

26. Child has free access to record player or radio.
27. Child has free access to musical instrument (piano, drum, ukulele, or guitar, etc.)
28. Child has free access to at least ten appropriate books.
29. Parent buys and reads a newspaper daily.
30. Child has free access to desk or other suitable place for reading or studying.
31. Family has a dictionary and encourages child to use it.
32. Child has visited a friend by him/herself in the past week.
33. House has at least two pictures or other type of art work on the walls.

V. Enrichment (alpha= .62)

34. Family has a TV and it is used judiciously, not left on continuously. (No TV requires an automatic NO- Any scheduling scores Yes).
35. Family encourages child to develop or sustain hobbies.
36. Child is regularly included in family's recreational hobby.
37. Family provides lessons or organizational membership to support child's talents (especially Y membership, gymnastic lessons, Art Center, etc.)
38. Child has ready access to at least two pieces of playground equipment in the immediate vicinity.
39. Child has access to a library card, a family arranges for child to go to library once a month.
40. Family member has taken child, or arranged for child to go to a scientific, historical or art museum within the past year.
41. Family member has taken child, or arranged for child to take a trip on a plane, train, or bus within the past year.

VI. Family Companionship (alpha= .56)

- 42. Family visits or receives visits from relatives or friends at least once every other week.
- 43. Child has accompanied parent on a family business venture 3-4 times within the past year; e.g., to garage, clothing shop, appliance repair shop, etc.
- 44. Family member has taken child, or arranged for child to attend some type of live musical or theatre performance.
- 45. Family member has taken child, or arranged for child to go on a trip of more than 50 miles from his home. (50 miles radial distance, not total distance).
- 46. Parents discuss TV programs with child.
- 47. Parent helps child to achieve motor skills- ride a two-wheel bicycle, roller skate, ice skate, play ball, etc.
- 48. Father (or father substitute) regularly engages in outdoor recreation with child.
- 49. Child sees and spends some time with father or father figure 4 days a week.
- 50. Child eats at least 1 meal per day, on most days, with mother and father (or mother and father figures). (1 parent families rate an automatic NO).
- 51. Child has remained with this primary family group for ALL his life aside from 2-3 weeks vacations, illnesses of mother, visits of grandmother, etc.

VII. Physical Environment (alpha= .80)

- 52. Child's room has a picture or wall decoration appealing to children.
- 53. The interior of the apartment is not dark or perceptually monotonous.
- 54. In terms of available floor space, the rooms are not overcrowded with furniture.
- 55. All visible rooms of the house are reasonably clean and minimally cluttered.
- 56. There is at least 100 square feet of living space per person in the house.
- 57. House is not overly noisy- TV, shouts of children, radio, etc.
- 58. Building has no potentially dangerous structural or health defects (e.g., plaster coming down from ceiling, stairway with boards missing, rodents, etc.)
- 59. Child's outside play environment appears safe and free of hazards. (No outside play area requires an automatic NO).

Appendix J4

HOME Inventory: Higher Order Factor Analysis

	<u>Factor 1</u> <u>Cognitive Stimulation</u>	<u>Factor 2</u> <u>Emotional Support</u>
<u>Infant/Toddler HOME Inventory</u>		
Responsivity	.42	.73
Acceptance	.09	.92
Organization	.82	.22
Learning Materials	.89	.16
Involvement	.82	.34
Variety	.80	.16
<u>Early Childhood HOME Inventory</u>		
Learning Material	.91	.21
Language Stimulation	.83	.43
Physical Environment	.79	.03
Academic Stimulation	.82	.34
Variety	.93	.13
Responsivity	.56	.66
Modeling	.16	.77
Acceptance	.07	.87
<u>Middle Childhood HOME Inventory</u>		
Responsivity	.49	.74
Encouragement of Maturity	.13	.88
Acceptance	.29	.78
Learning Material	.88	.25
Enrichment	.75	.33
Family Companionship	.75	.17
Physical Environment	.81	.26

Appendix J5

HOME Inventory Composite scalesAge 3Cognitive Stimulation Composite scale (alpha= .92)

- Items: Child care, if used, is provided by one of three regular substitutes (corrected correlation total= .12)
- Child is taken to grocery store at least once a week (corrected correlation total= .71)
- Child gets out of house at least 4 times a week (corrected correlation total= .26)
- Child is taken regularly to doctor's office or clinic (corrected correlation total= .37)
- Child has a special place for toys and treasures (corrected correlation total= .71)
- Child's play environment is safe (corrected correlation total= .46)
- Muscle activity toys or equipment (corrected correlation total= .67)
- Push or pull toy (corrected correlation total= .58)
- Stroller or walker, kiddie car, scooter, or tricycle (corrected correlation total= .50)
- Parent provides toys for child to play with during visit (corrected correlation total= .91)
- Cuddly toy or role-playing toys (corrected correlation total= .79)
- Learning facilitators- mobile, table and chair, high chair, play pen (corrected correlation total= .60)
- Simple eye-hand coordination toys (corrected correlation total= .82)
- Complex eye-hand coordination toys (corrected correlation total= .66)
- Toys for literature and music (corrected correlation total= .54)
- Parent keeps child in visual range, looks at often (corrected correlation total= .25)
- Parent talks to child while doing household work (corrected correlation total= .58)
- Parent consciously encourages developmental advance (corrected correlation total= .73)
- Parent invests maturing toys with value via personal attention (corrected correlation total= .73)
- Parent structures child's play periods (corrected correlation total= .27)
- Parent provides toys that challenge child to develop new skills (corrected correlation total= .30)
- Father provides some daily care (corrected correlation total= .27)
- Parent reads stories to child at least 3 times weekly (corrected correlation total= .27)
- Child eats at least one meal a day with mother and father (corrected correlation total= .43)
- Family visits relatives or receives visits once a month or so (corrected correlation total= .02)*
- Child has 3 or more books of his/her own (corrected correlation total= .89)

Emotional Support Composite scale (alpha= .82)

- Items: Parent spontaneously vocalizes to child at least twice (corrected correlation total= .58)
 Parent responds verbally to child's vocalizations or verbalizations (corrected correlation total= .25)
 Parent tells child name of object or person during visit (corrected correlation total= .50)
 Parent's speech is distinct, clear and audible (corrected correlation total= .36)
 Parent initiates verbal interchanges with Visitor (corrected correlation total= .27)
 Parent converses freely and easily (corrected correlation total= .26)
 Parent permits child to engage in messy play (corrected correlation total= -.01)*
 Parent spontaneously praises child at least twice (corrected correlation total= .48)
 Parent's voice conveys positive feelings toward child (corrected correlation total= .61)
 Parent caresses or kisses child at least once (corrected correlation total= .67)
 Parent responds positively to praise of child offered by Visitor (corrected correlation total= .00)*
 Parent does not shout at child (corrected correlation total= .56)
 Parent does not express overt annoyance with or hostility to child (corrected correlation total= .49)
 Parent neither slaps nor spanks child during visit (corrected correlation total= .42)
 No more than 1 instance of physical punishment during past week (corrected correlation total= .51)
 Parent does not scold or criticize child during visit (corrected correlation total= .46)
 Parent does not interfere with or restrict child 3 times during visit (corrected correlation total= .20)
 At least 10 books are present and visible (corrected correlation total= -.03)*
 Family has a pet (corrected correlation total= .08)

Age 6Cognitive Stimulation Composite scale (alpha= .95)

- Items: Child has toys which teach colors, sizes, and shapes (corrected correlation total= .60)
 Child has three or more puzzles (corrected correlation total= .59)
 Child has a record player or tape recorder and at least 5 children's records or tapes (corrected correlation total= .62)
 Child has toys or games permitting free expression (corrected correlation total= .67)
 Child has toys or games requiring refined movements (corrected correlation total= .77)
 Child has toys or games which help teach numbers (corrected correlation total= .68)
 Child has at least 10 children's books (corrected correlation total= .70)
 At least 10 books are visible in the apartment or home (corrected correlation total= .17)
 Family buys and reads a daily newspaper (corrected correlation total= .69)

Family subscribes to at least one magazine (corrected correlation total= .11)
Child is encouraged to learn shapes (corrected correlation total= .78)
Child has toys that help teach the names of animals (corrected correlation total= .66)
Child is encouraged to learn the alphabet (corrected correlation total= .76)
Parent teaches child simple verbal manners (please, thank you, I'm sorry) (corrected correlation total= .39)
Parent uses correct grammar and pronunciation (corrected correlation total= .24)
Parent encourages child to talk and takes time to listen (corrected correlation total= .32)
Parent's voice conveys positive feelings about child (corrected correlation total= .11)
Child is permitted choice in breakfast or lunch menu (corrected correlation total= .85)
Building appears safe and free of hazards (corrected correlation total= .49)
Outside play environment appears safe (corrected correlation total= .28)
Interior of apartment is not dark or perceptually monotonous (corrected correlation total= 72.)
Neighbourhood is aesthetically pleasing (corrected correlation total= .31)
House has 100 square feet of living space per person (corrected correlation total= .70)
Rooms are not overcrowded with furniture (corrected correlation total= .64)
House is reasonably clean and minimally cluttered (corrected correlation total= .19)
Child is encouraged to learn colors (corrected correlation total= .63)
Child is encouraged to learn patterned speech (corrected correlation total= .59)
Child is encouraged to learn spatial relationships (corrected correlation total= .62)
Child is encouraged to learn numbers (corrected correlation total= .75)
Child is encouraged to learn to read a few words (corrected correlation total= .64)
Child has real or toy musical instrument (corrected correlation total= .23)
Child is taken on outing by a family member at least every other week (corrected correlation total= .12)
Child has been on trip more than 50 miles during the last year (corrected correlation total= .58)
Child has been taken to a museum during past year (corrected correlation total= .61)
Parent encourages child to put away toys without help (corrected correlation total= .69)
Parent uses complex sentence structure and vocabulary (corrected correlation total= .28)
Child's art is displayed some place in house (corrected correlation total= .38)
Child eats at least one meal per day with mother (or mother figure) and father (or father figure) (corrected correlation total= .28)
Parent lets child choose certain favorite food products or brands at grocery store (corrected correlation total= .80)

Emotional Support Composite scale (alpha= .79)

- Items: Parent holds child close 10-15 minutes per day (corrected correlation total= .57)
 Parent converses with child at least twice during visit (corrected correlation total= .35)
 Parent answers child's questions or requests verbally (corrected correlation total= .01)
 Parent usually responds verbally to child's speech (corrected correlation total= .14)
 Parent praises child's qualities twice during visit (corrected correlation total= .58)
 Parent caresses, kisses, or cuddles child during visit (corrected correlation total= .60)
 Parent helps child demonstrate some achievement during visit (corrected correlation total= .33)
 Some delay of food gratification is expected (corrected correlation total= -.14)*
 TV is used judiciously (corrected correlation total= .21)
 Parent introduces Visitor to child (corrected correlation total= .43)
 Child can express negative feelings without harsh reprisal (corrected correlation total= .52)
 Child can hit parent without harsh reprisal (corrected correlation total= .23)
 Parent does not scold or yell at or derogate child more than once (corrected correlation total= .59)
 Parent does not use physical restraint during visit (corrected correlation total= .23)
 Parent neither slaps nor spansks child during visit (corrected correlation total= .17)
 No more than one instance of physical punishment occurred during the past week (corrected correlation total= .51)

Age 8Cognitive Stimulation Composite scale (alpha= .90)

- Items: Child has free access to record player or radio (corrected correlation total= .52)
 Child has free access to musical instrument (piano, drum, ukulele, or guitar, etc.) (corrected correlation total= .16)
 Child has free access to at least ten appropriate books (corrected correlation total= .60)
 Parent buys and reads a newspaper daily (corrected correlation total= .61)
 Child has free access to desk or other suitable place for reading or studying (corrected correlation total= .66)
 Family has a dictionary and encourages child to use it (corrected correlation total= .46)
 Child has visited a friend by him/herself in the past week (corrected correlation total= -.26)*
 House has at least two pictures or other type of art work on the walls (corrected correlation total= .69)
 Family has a TV and it is used judiciously, not left on continuously. (No TV requires an automatic NO- Any scheduling scores YES) (corrected correlation total= .33)

Family encourages child to develop or sustain hobbies (corrected correlation total= .46)

Child is regularly included in family's recreational hobbies (corrected correlation total= .44)

Family provides lessons or organizational membership to support child's talents (especially Y membership, gymnastic lessons, Art Centre, etc.) (corrected correlation total= -.00)*

Child has ready access to at least two pieces of playground equipment in the immediate vicinity (corrected correlation total= .57)

Child has access to a library card, and family arranges for child to go to library once a month (corrected correlation total= .00)*

Family member has taken child, or arranged for child to go to a scientific, historical or art museum within the past year (corrected correlation total= .66)

Family member has taken child, or arranged for child to take a trip on a plane, train, or bus within the past year (corrected correlation total= .46)

Family visits or receives visits from relatives or friends at least once every other week. (corrected correlation total= .00)*

Child has accompanied parent on a family business venture 3-4 times within the past year; e.g., to garage, clothing shop, appliance repair shop, etc. (corrected correlation total= .17)

Family member has taken child, or arranged for child to attend some type of live musical or theatre performance. (corrected correlation total= .33)

Family member has taken child, or arranged for child to go on a trip of more than 50 miles from his home. (50 miles radial distance, not total distance). (corrected correlation total= .59)

Parents discuss TV programs with child. (corrected correlation total= .48)

Parent helps child to achieve motor skills- ride a two-wheel bicycle, roller skate, ice skate, play ball, etc. (corrected correlation total= .54)

Father (or substitute) regularly engages in outdoor recreation with child. (corrected correlation total= .23)

Child sees and spends some time with father or father figure 4 days a week. (corrected correlation total= .13)

Child eats at least 1 meal per day, on most days, with mother and father (or mother and father figures). (1 parent families rate an automatic NO). (corrected correlation total= .26)

Child has remained with this primary family group for ALL his life aside from 2-3 week vacations, illnesses of mother, visits of grandmother, etc. (corrected correlation total= .06)

Child's room has a picture or wall decoration appealing to children. (corrected correlation total= .71)

The interior of the apartment is not dark or perceptually monotonous. (corrected correlation total= .68)

In terms of available floor space, the rooms are not overcrowded with furniture.

(corrected correlation total= .67)

All visible rooms of the house are reasonably clean and minimally cluttered. (corrected correlation total= .21)

There is at least 100 square feet of living space per person in the house. (corrected correlation total= .73)

House is not overly noisily- TV, shouts of children, radio, etc. (corrected correlation total= .19)

Building has no potentially dangerous structural or health defects. (e.g., plaster coming down from ceiling, stairway with boards missing, rodents, etc.) (corrected correlation total= .63)

Child's outside play environment appears safe and free of hazards. (No outside play area requires an automatic NO). (corrected correlation total= .16)

Emotional Support Composite scale (alpha= .84)

Items: Family has fairly regular & predictable daily schedule for child (meals, day care, bedtime, TV, homework, etc.) (corrected correlation total= .52)

Parent sometimes yields to child's fears or rituals (allows night light, accompanies child to new experiences, etc.) (corrected correlation total= .19)

Child has been praised at least twice during past week for doing something. (corrected correlation total= .68)

Child is encouraged to read on his own. (corrected correlation total= .58)

Parent encourages child to contribute to the conversation during the visit. (corrected correlation total= .55)

Parent shows some positive emotional responses to praise of child by Visitor. (corrected correlation total= .19)

Parent responds to child's questions during visit. (corrected correlation total= .35)

Parent uses complete sentence structure and some long words in conversing. (corrected correlation total= .23)

When speaking of or to child, parent's voice conveys positive feelings. (corrected correlation total= .40)

Parent initiates verbal interchanges with Visitor, asks questions, makes spontaneous comments. (corrected correlation total= .17)

Family requires child to carry out certain self-care routines, e.g., makes bed, cleans room, cleans up after spills, and bathes self. (A yes requires 3 out 4) (corrected correlation total= -.07)*

Family requires child to keep living and play area reasonably clean and straight (corrected correlation total= .46)

Child puts own outdoor clothing, dirty clothes, night clothes in special place (corrected correlation total= .28)

Parents set limits for child and generally enforce them (curfew, homework before TV, or other regulations that fit family pattern) (corrected correlation total= .31)

Parent introduces Visitor to child (corrected correlation total= .55)

Parent is consistent in applying family rules (corrected correlation total= .22)

Parent does not violate rules of common courtesy during visit (corrected correlation total= .30)

Parent has not lost temper with child more than once during previous week. (corrected correlation total= .54)

Parent reports no more than one instance of physical punishment occurred during past month. (corrected correlation total= .47)

Child can express negative feelings toward parents without harsh reprisals. (corrected correlation total= .51)

Parent has not cried or been visibly upset in child's presence more than once during past week. (corrected correlation total= .05)

Child has a special place in which to keep own possessions. (corrected correlation total= .38)

Parent talks to child during visit (beyond correction and introduction). (corrected correlation total= .42)

Parent uses some term of endearment or some diminutive for child's name when talking about child at least twice during visit. (corrected correlation total= .32)

Parent does not express overt annoyance with or hostility toward child- complains, describes child as bad, says child won't mind, etc. (corrected correlation total= .41)

** Item deleted*

Appendix K

Child Development Inventory (CDI)Total Child Development scale (alpha= .98)Social scale (40 items) (alpha= .89)

Greets people with Hi! or similar expression.(corrected item total correlation=.39)

Tattles or tells on other children.(.17)

Shows sympathy to other children, tries to help and comfort them. (.26)

Sometimes says No when interfered with. (.01)

Helps a little with household tasks. (.42)

Asks for help in doing things. (.45)

Says I can't, I don't know or You do it. (.37)

Pays attention well- listen to others. (.29)

Apologizes - says I'm sorry when he/she does something wrong. (.44)

Gives directions to other children. (.67)

Recognizes familiar adults and reaches for them. (.33)

Plays physical games with other children such as tag, hide-and-seek, hopscotch, etc. (.50)

Asks for help from other children, such as help doing something, information or explanations. (.43)

Makes or builds things with other children. (.54)

Plays simple board games such as checkers. (.23)

Asks you to Look, watch me when he/she is doing something. (.35)

Wants a doll, teddy bear, blanket, etc. in bed with him/her. Or used to. (.16)

Understands Wait a minute. Waits patiently for short periods of time. (.27)

Follows simple games rules in board games or card games. (.13)

Interested in his/her image in a mirror. (.37)

Talks about how to do things with other children- tells ideas and listens to other children's ideas. (.60)

Plays games that involve taking turns and usually waits for his/her turn. (.46)

Usually obeys when asked to do something or told not to. (.32)

Offers help to others. (.55)

Plays with other children, doing things with them. (.46)

Pretends to do familiar activities like talking on the telephone or being asleep. (.44)

Makes excuses. (.47)

Shows affection toward other children. (.27)

Speaks positively about self- says, I'm good, I'm big, etc. (.56)

Initiates activities involving other children. (.63)

Plays pretend games with other children, house, etc., pretending to be Mom or Dad, teacher, astronaut. (.54)

Usually follows directions during supervised group activities with playmates. (.62)
Expresses complaints in words. (.31)
Usually shares toys or other possessions- may have occasional arguments. (.33)
Acts in a protective way toward younger children. (.21)
Sometimes will sacrifice his/her own wishes for the benefit of the group. (.17)
Shows affection: Gives hugs or kisses. (.29)
Usually responds well to correction- stops misbehaving. (.27)
Fits into groups well- listens, shares, takes turns, and contributes. (.54)
Shows leadership among children his/her age, directing and helping them. (.51)

Self Help scale (40 items) (alpha= .92)

Feeds self with a spoon. (corrected item total correlation= .18)
Eats with a spoon with little spilling. (.00)*
Washes and dries hands. (.40)
Toilet-trained for urine control and bowel movements. (.40)
Buttons one or more buttons. (.67)
Buttons a shirt, blouse, or coat, having all the buttons in the correct holes. (.69)
Eats with a fork. (.37)
Dresses and undresses without help, except for tying shoelaces. (.67)
Opens door by turning knob and pulling. (.51)
Lifts a cup to his/her mouth and drinks. (.23)
Puts on a shirt or blouse without help. (.47)
Takes off shoes and socks. (.33)
Hands empty dish to mother or father. (.12)
Goes around the house independently; requires little supervision. (.06)
Undresses completely without help. (.45)
Remembers where things are kept in the house. (.36)
Feeds self a cracker or cookie. (.28)
Uses a small pail or other container for carrying things. Or used to. (.39)
Put shoes on the correct feet. (.71)
Washes self in bathtub- may need a little help. (.40)
Takes care of personal belongings. (.60)
Uses a table knife for spreading. (.67)
Removes socks. (.20)
Washes face without help. (.50)
Stays dry all night. (.43)
Chews food. (.21)
Tries to put on shoes. Or put them on. (.49)
Notices when shirt (blouse) or pants are inside-out and turns them right-side-out. (.67)
Unzips zippers. (.53)
Wipes up spills, using cloth or sponge. (.57)

Pours dry cereal and milk into bowl without spilling. (.68)
Climbs on a chair, stool, or box to reach things. (.14)
Picks up a spoon by the handle. (.19)
Takes off unbuttoned shirt or blouse without help. (.34)
Brushes teeth without help. (.36)
Pours self a drink. (.56)
Ties shoelaces. (.61)
Usually looks both ways when crossing streets. (.48)
Goes to toilet without help; wipes self, flushes toilet, and washes hands. (.59)
Takes responsibility for self in eating, dressing, and washing- but may need a little help. (.58)

Gross Motor scale (30 items) (alpha= .89)

Walks without help. (corrected item total correlation= .46)
Jumps from steps with feet together. Or used to. (.56)
Throws a ball while standing. (.39)
Runs. (.38)
Runs smoothly, turning corners and making sudden stops. (.28)
Rides around on tricycle using pedals. (.53)
Walks up and down stairs alone. (.68)
Walks up and down stairs alone, one foot to a step, alternating feet. (.63)
Kicks a ball. (.48)
Hops on one foot, at least two times, without support. (.50)
When running, jumps over obstacles that are in the way. (.43)
Stands on one foot, steady, without support. (.51)
Climbs on playground equipment. (.56)
Does a forward somersault. (.65)
Hops around on one foot without support. (.60)
Swings on swing, pumping by self. (.37)
Rolls over from back to stomach. Or used to. (.46)
Stands steady, without support. (.39)
From a standing position, jumps over objects or people. (.48)
Sidesteps around furniture or crib while holding on. Or walks. (.21)
Runs well without falling. (.31)
Stand on one foot for a few seconds without support. (.38)
Climbs up ladder and slides down slide without help. (.60)
Sits without support. (.34)
Rides a two-wheeled bike with or without training wheels. (.32)
Pulls self to standing position. Or gets self to standing. (.36)
Does cartwheels. (.53)
Plays catch with other children; throwing to them and catching the ball at least half the time(.50)

Climbs into an adult size chair and seats self. (.21)

Shows good balance and coordination in physical play activities such as running, climbing, and jumping. (.19)

Fine Motor scale (30 items) (alpha= .95)

Picks up objects with one hand. (corrected item total correlation= .18)

Builds a tower of two or more blocks. (.49)

Holds two objects at the same time, one in each hand. (.21)

Use two hands to pick up large objects. (.17)

Draws or copies two lines that cross (+). (.76)

Puts together puzzles with nine or more pieces. (.63)

Picks up small objects, such as bits of dry cereal, using thumb and one finger. (.39)

Draws pictures of complete people that include at least a head, with eyes-nose-mouth, body, arms and legs, hands and feet. (.61)

Holds crayon with fingers and thumb, somewhat like an adult. (.65)

Transfers objects from one hand to the other. (.15)

Scribbles with a crayon or pencil. Or used to. (.37)

Cuts across paper with scissors from one side to the other. (.71)

Draws recognizable pictures. (.80)

Draws or copies a complete circle. (.77)

Attempts to cut with small scissors. Or cuts. (.77)

Draws or copies a square that has four good corners (9). (.82)

Cuts with scissors, following a simple outline or pattern. (.71)

Builds a tower of five or more blocks. (.59)

Turns pages of children's books one page at a time. (.57)

Draws pictures of people that have at least three parts, such as head, eyes, nose, mouth, hair, body, arms, or legs. (.71)

Builds a tower of eight or more blocks. (.60)

Uses one hand more than the other; has a hand preference. (-.09)*

Builds things with blocks, such as a simple house, bridge, or car. (.71)

Colors within the lines in a colouring book. (.74)

Scribbles with a circular motion. Or used to. (.64)

Unscrews and screws on covers of jars or bottles. (.37)

Draws or copies vertical (|) and horizontal (—) lines. (.78)

Places single pieces- simple shapes or figures- in a puzzle board. (.74)

Picks up two small toys with one hand. (.31)

Draws and prints in a planned, organized way. (.53)

Expressive Language scale (50 items) (alpha= .93)

Calls you Mama or Dada or similar name.(corrected item total correlation= .13)

Talks in longer sentences to express complete thoughts- at least six words long. (.46)

- Retells short stories such as Little Red Riding Hood; tells what happens in correct order and how the story ends. (.63)
- Talks in the past tense correctly, for example, says I played with Billy. I did. We went.... (.64)
- Uses the word you in sentences. (.44)
- Describes objects specifically, in detail, for example, Dolly has hair, a dress, Doggie has a tail, etc. (.66)
- Uses the words don't, can't or won't. (.39)
- Says two or more words besides Mama or Dada. (.36)
- Uses the words a, an, and the, for example, Look, a dog. See the kitty. (.24)
- Uses at least 10 words. (.31)
- Makes statements such as If I do..., then I can, or When I ..., then.... (.60)
- Jabbers; makes sounds like he/she is talking in sentences. Or used to. (.23)
- Uses the words me, my and I correctly. (.41)
- Uses the plurals correctly, for example, says men not mans, mice, not mouse. (.36)
- Talks about things that could or might happen, for example, He could hurt himself if he's not careful. (.55)
- Tells what action is going on in pictures- for example, Kitty is eating. (.39)
- Sings simple songs. (.48)
- Uses the word not in sentences. (.48)
- Easily expresses his/her ideas in complete sentences, using good grammar and pronouncing most words correctly. (.61)
- Asks questions beginning with what or where. (.36)
- Talks in sentences at least four words long. (.41)
- Gives reasons for things, using the word because.... (.54)
- Speaks clearly; is understandable most of the time. (.37)
- Uses at least five words as names of familiar objects. (.28)
- Uses at least one of the following words- me, I, he, she, you, or it. (.43)
- Asks questions beginning with why, when, or how. (.49)
- Has a vocabulary of 20 or more words. (.46)
- Talks in long, complex sentences, ten words or longer. (.63)
- Talks about things that have happened in detail, describing a series of events, for example, We went to....., and we....then we..... (.67)
- Refers to his/her things as my or mine. (.30)
- Uses plural pronouns such as we, you, they, or us correctly. (.48)
- Uses 50 or more different words in everyday conversation. (.62)
- Whispers. (.15)
- Names simple shapes such as circle, square, triangle, and star. (.62)
- Asks simple questions using correct grammar. (.57)
- Points to things. (.17)
- Asks the meaning of words. (.58)
- Uses the plural words, adding s, for example, girls, cars. (.55)

Recites a nursery rhyme such as Jack and Jill went up a hill to..... (.55)
 Asks for more or another one. (.21)
 Talks with words in the correct order. (.50)
 Asks for a drink or for food, using words or sounds. (.10)
 Talks in two or three word phrases. Or in longer sentences. (.47)
 Names a few familiar objects in picture books. (.35)
 Says Please and Thank you. (.52)
 Names at least five body parts, such as eyes, nose, mouth, hands, or feet, when asked. (.39)
 Puts two sentences together with the words and, or, or but. (.68)
 Has a large vocabulary that is beyond simple counting. (.36)
 Says- pronounces- most words he/she uses correctly. (.48)
 Names the days of the week in correct order. (.26)

Language Comprehension scale (50 items) (alpha= .94)

Responds to his/her name; turns and looks. (corrected item total correlation=.18)
 Answers why? questions, giving good explanations, for example, Why do we wear coats?. (.52)
 Points at least body parts, such as eyes, nose, mouth, hands, or feet, when asked. (.29)
 Understand what off and on mean; follows directions using these words. (.28)
 Understands the meaning of up and down. (.39)
 Uses the words today, yesterday and tomorrow correctly. (.60)
 Knows right hand from left. (.61)
 Refers to self and other children as boy or girl correctly. (.40)
 Knows the meaning of same and different; tells how two things are alike and how they are different. (.60)
 When asked, What is a....?, describes the objects or tells what you do with it, for example, An apple? Is red. or You eat it. (.63)
 Identifies at least four colors by name correctly. (.70)
 Uses the words big and little. (.45)
 Answers questions like What do you do with acracker?...a hat?...a glass? (.28)
 Answers the questions What do you do with your ...eyes?...ears? (.49)
 Answers If...then? questions such as If you get hurt, then what do you do? (.64)
 Responds to simple questions appropriately with Ayes or no. (.32)
 Follows two-part instructions, for example, Go to your room and bring me.... (.29)
 When asked, What is a ...? talks about the group it belongs to, for example, A horse? Is an animal. An orange? Is a fruit. (.63)
 Follows simple instructions. (.36)
 Uses- est words like biggest, strongest, greatest. (.64)
 Imitates some sounds that you make. Or used to. (.29)
 Says first name at least when asked, What is your name? (.39)
 Tells what a few objects are made of such as a coat or chair. (.63)
 Understands what open and close or shut mean; follows directions using these words. (.51)

Answers questions like What do you do when you are ...thirsty?....hungry?....tired? (.50)
 Usually comes when called. (.17)
 Uses the words fast and slow correctly. (.50)
 Tells where he/she lives, naming town or city. (.64)
 Answers What...for? questions like What is a stove for?...a book for? (.58)
 Hands a toy to you when asked. (.08)
 Understands what full and empty mean; uses these words correctly. (.43)
 Understands the meaning of at least three location words such as in, on, under, beside. (.54)
 Says when something is heavy. (.53)
 Answers questions like What does a ...doggie, kitty, duck...say? (.42)
 Tells whether a sound is loud or soft. (.51)
 Says first and last name when asked. (.62)
 Uses the words good and bad to describe self and other children. (.53)
 Tells age correctly when asked, How old are you? (.63)
 Understands the meaning of at least six location words, such as in, on, under, beside, top, bottom, above, below. (.67)
 Carries out a series of three simple instructions in the right order, such as, Do this...then...then.... (.58)
 Waves bye-bye or good by. (.29)
 Understands what before and after mean; uses these words correctly. (.67)
 Understands what easy and hard mean; uses these words correctly. (.65)
 Understands No No; stops at least briefly. (.24)
 Takes part in conversations, both talking and listening in turn. (.43)
 Talks about the future, about what is going to happen. (.54)
 Expresses likes and dislikes in words. (.47)
 Talks about feelings; says he/she feels happy, sad, bad, or mad. (.49)
 Identifies at least one color by name correctly. (.59)
 Talks about the qualities of objects, using descriptive words such as small, red, good, funny. (.60)

Letters scale (15 items) (alpha= .96)

Tries to read familiar books. Or reads them. (corrected item total correlation=.73)
 Recognizes a few simple words in a familiar book. (.86)
 Prints two or more simple words from memory. (.82)
 Asks what signs say, such as road signs, advertising, etc. (.70)
 Recites the alphabet, in order, without help. (.55)
 Recognizes and names at least five letters of the alphabet. (.88)
 Reads 15 or more words in a new book. (.79)
 Prints first and last name, with letters facing in the correct direction. (.75)
 Prints the alphabet- all 26 letters- by copying them or from memory. (.75)
 Attempts to read words by separating them into parts, for example, el-e-phant. (.82)

Prints a few letters or numbers. (.85)
 Prints a few simple words from a copy. (.89)
 Reads four or more books. (.88)
 Prints first name, or at least four letters of it. (.85)
 Recognizes and names all the letters in the alphabet. (.66)

Numbers scale (15 items) (alpha= .91)

Counts ten or more objects. (corrected item total correlation'. 81)
 Talks about things, comparing one to another, for example, says This one is bigger...heavier, etc. (.49)
 Recites numbers in order from 1 to 30. (.68)
 Tells when one object is longer or shorter than another object. (.46)
 Answers arithmetic questions such as How much is 2+2? 1+4? 3+6? (.74)
 Recognizes and names a few single numbers. (.79)
 Recites numbers in order from 1 to 10. (.77)
 Knows what half means. (.56)
 Prints the number 1 through 9. (.74)
 Knows how many fingers there are on each hand. (.72)
 Points to or names the bigger of two objects when asked. (.34)
 Does simple subtraction: How is 2-1? 4-2? 6-3? (.69)
 Counts three or more objects. (.51)
 Understands one and gives you just one when you ask for one. (.15)
 Tells time: Reads clock in hours and minutes. (.37)

Possible Problems scale (30 items) (alpha= .86)

Seems to have trouble seeing. (corrected item total correlation'.38)
 Seems to have trouble hearing. (.48)
 Health problems. (.37)
 Growth, height, or weight problems. (.43)
 Eating problems- eats poorly or too much, etc. (.48)
 Bowel or bladder problems, toilet training. (.41)
 Sleep problems. (.53)
 Aches and pains; earaches, stomachaches, headaches, etc. (.56)
 Energy problems; appears tired and sluggish. (.50)
 Clumsy; walks or runs poorly, stumbles or falls (age 2 and older). (.51)
 Clumsy in doing things with his/her hands. (.48)
 Does not talk well for age. (.50)
 Speech is difficult to understand (age 3 and older). (.53)
 Stutters or stammers. (.41)
 Does not seem to understand well; is slow to catch on. (.61)
 Immature; acts much younger than age. (.37)

Prefers to play with younger children. (.35)
 Dependent, clingy, or very upset about separating. (.50)
 Passive; seldom shows initiative. (.42)
 Does not pay attention; poor listener. (.41)
 Can't sit still; may be hyperactive. (.30)
 Disorganized; messy, careless, or irresponsible. (.30)
 Demanding; strong-willed. (.40)
 Disobedient; does not mind well, resists. (.25)
 Overly aggressive. (.30)
 Timid, fearful, or worries a lot. (.11)
 Unhappy; cries a lot or whines a lot. (.34)
 Seldom plays with other children. (.34)
 Lacks self-confidence; says I'm dumb, etc. (.28)
 Other problems. What? Write in margin of answer sheet. (.23)

General Development scale (70 items) (alpha= .96)

Greets people with Hi or similar expression. (corrected item total correlation= .33)
 Tattles or tells on other children. (.02)*
 Shows sympathy to other children, tries to help and comfort them. (.13)
 Sometimes says No when interfered with. (.01)*
 Helps a little with household tasks. (.30)
 Asks for help in doing things. (.40)
 Says I can't, I don't know or You do it. (.24)
 Pays attention well- listen to others. (.32)
 Apologizes - says I'm sorry when he/she does something wrong. (.54)
 Gives directions to other children. (.58)
 Feeds self with a spoon. (corrected item total correlation = .13)
 Eats with a spoon with little spilling. (-.07)*
 Washes and dries hands. (.33)
 Toilet-trained for urine control and bowel movements. (.38)
 Buttons one or more buttons. (.68)
 Buttons a shirt, blouse, or coat, having all the buttons in the correct holes. (.71)
 Eats with a fork. (.34)
 Dresses and undresses without help, except for tying shoelaces. (.67)
 Opens door by turning knob and pulling. (.59)
 Lifts a cup to his/her mouth and drinks. (.26)
 Walks without help. (.33)
 Jumps from steps with feet together. Or used to. (.58)
 Throws a ball while standing. (.24)
 Runs. (.33)

- Runs smoothly, turning corners and making sudden stops. (.33)
- Rides around on tricycle using pedals. (.55)
- Walks up and down stairs alone. (.58)
- Walks up and down stairs alone, one foot to a step, alternating feet. (.46)
- Kicks a ball. (.43)
- Hops on one foot, at least two times, without support. (.38)
- Scribbles with a crayon or pencil. Or used to. (.36)
- Cuts across paper with scissors from one side to the other. (.74)
- Draws recognizable pictures. (.77)
- Draws or copies a complete circle. (.67)
- Attempts to cut with small scissors. Or cuts. (.75)
- Draws or copies a square that has four good corners (9). (.80)
- Cuts with scissors, following a simple outline or pattern. (.67)
- Builds a tower of five or more blocks. (.50)
- Turns pages of children's books one page at a time. (.53)
- Draws pictures of people that have at least three parts, such as head, eyes, nose, mouth, hair, body, arms, or legs. (.65)
- Talks in sentences at least four words long. (.28)
- Gives reasons for things, using the word because.... (.36)
- Speaks clearly; is understandable most of the time. (.26)
- Uses at least five words as names of familiar objects. (.14)
- Uses at least one of the following words- me, I, he, she, you, or it. (.29)
- Asks questions beginning with why, when, or how. (.30)
- Has a vocabulary of 20 or more words. (.33)
- Talks in long, complex sentences, ten words or longer. (.51)
- Talks about things that have happened in detail, describing a series of events, for example, We went to....., and we....then we..... (.68)
- Refers to his/her things as Amy or Amine. (.17)
- Identifies at least four colors by name correctly. (.77)
- Uses the words big and little. (.40)
- Answers questions like What do you do with acracker?...a hat?...a glass? (.23)
- Answers the questions What do you do with your ...eyes?...ears? (.43)
- Answers If...then? questions such as If you get hurt, then what do you do? (.69)
- Responds to simple questions appropriately with Ayes or no. (.20)
- Follows two-part instructions, for example, Go to your room and bring me.... (.18)
- When asked, What is a ... talks about the group it belongs to, for example, A horse? Is an animal. An orange? Is a fruit. (.56)
- Follows simple instructions. (.25)
- Uses- est words like biggest, strongest, greatest. (.66)
- Prints a few letters or numbers. (.74)
- Prints a few simple words from a copy. (.70)

Reads four or more books. (.64)

Prints first name, or at least four letters of it. (.67)

Recognizes and names all the letters in the alphabet. (.48)

Counts ten or more objects. (.78)

Talks about things, comparing one to another, for example, says This one is bigger...heavier, etc. (.57)

Recites numbers in order from 1 to 30. (.59)

Tells when one object is longer or shorter than another object. (.54)

Answers arithmetic questions such as How much is $2+2$? $A1+4$? $A3+6$? (.58)

** Item deleted*

Appendix L1

Strengths and Difficulties Questionnaire- Parent Version

Total scale (alpha=.68)

Emotional scale (alpha= .58)

3. Often complains of headaches, stomach-aches or sickness. (corrected item total correlation=.26)
8. Many worries, often seems worried. (.35)
13. Often unhappy, down-hearted or tearful. (.41)
16. Nervous or clingy in new situations, easily loses confidence. (.36)
24. Many fears, easily scared. (.35)

Behaviour scale (alpha= .61)

5. Often has temper tantrums or hot tempers. (.47)
7. Generally obedient, usually does what adults request. (.28)
12. Often fights with other children or bullies them. (.47)
18. Often lies or cheats. (.37)
22. Steals from home, school or elsewhere. (.27)

Hyperactivity scale (alpha= .63)

2. Restless, overactive, cannot stay still for long. (.40)
10. Constantly fidgeting or squirming. (.51)
15. Easily distracted, concentration wanders. (.43)
21. Thinks things out before acting. (.28)
25. Sees tasks through to the end, good attention span. (.30)

Interpersonal scale (alpha= .32)

6. Rather solitary, tends to play alone. (.11)
11. Has at least one good friend. (.06)*
14. Generally liked by other children. (.14)
19. Picked on or bullied by other children. (.21)
23. Gets on better with adults than with other children. (.19)

Prosocial scale (alpha= .72)

1. Considerate of other people's feelings. (.47)
4. Shares readily with other children (treats, toys, pencils, etc). (.51)
9. Helpful if someone is hurt, upset or feeling ill. (.51)
17. Kind to younger children. (.42)
20. Often volunteers to help others (parents, teachers, other children). (.49)

Total Problems scale (Sum of the Emotional, Behavioural, Hyperactivity and Interpersonal subscales) ($\alpha=.77$)

2. Restless, overactive, cannot stay still for long. (corrected item total correlation= .34)
3. Often complains of headaches, stomach-aches or sickness. (.23)
5. Often has temper tantrums or hot tempers. (.54)
6. Rather solitary, tends to play alone. (.06)*
7. Generally obedient, usually does what adults request. (.37)
8. Many worries, often seems worried. (.32)
10. Constantly fidgeting or squirming. (.51)
11. Has at least one good friend. (.09)
12. Often fights with other children or bullies them. (.46)
13. Often unhappy, down-hearted or tearful. (.37)
14. Generally liked by other children. (.13)
15. Easily distracted, concentration wanders. (.44)
16. Nervous or clingy in new situations, easily loses confidence. (.39)
18. Often lies or cheats. (.41)
19. Picked on or bullied by other children. (.39)
21. Thinks things out before acting. (.32)
22. Steals from home, school or elsewhere. (.22)
23. Gets on better with adults than with other children. (.17)
24. Many fears, easily scared. (.26)
25. Sees tasks through to the end, good attention span. (.33)

* *Item deleted*

Appendix L2

Factor Structure:SDQ- Parent Version

<u>Factor 1- Prosocial scale</u>	<u>Loading on factor</u>
1. Considerate of other people's feelings.	.66
4. Shares readily with other children (treats, toys, pencils, etc).	.56
9. Helpful if someone is hurt, upset or feeling ill.	.61
17. Kind to younger children.	.48
20. Often volunteers to help others (parents, teachers, other children).	.54
7. <i>Generally obedient, usually does what adults request.</i>	-.33
11. <i>Has at least one good friend.</i>	-.27
14. <i>Generally liked by other children.</i>	-.29
25. <i>Sees tasks through to the end, good attention span.</i>	-.40
 <u>Factor 2- Hyperactivity scale</u>	
2. Restless, overactive, cannot stay still for long.	.84
10. Constantly fidgeting or squirming.	.63
15. Easily distracted, concentration wanders.	.39
3. <i>Often complains of headaches, stomach-aches or sickness.</i>	.29
 <u>Factor 3- Emotional scale</u>	
8. Many worries, often seems worried.	.45
13. Often unhappy, down-hearted or tearful.	.55
16. Nervous or clingy in new situations, easily loses confidence.	.54
24. Many fears, easily scared.	.42
5. <i>Often has temper tantrums or hot tempers.</i>	.43
 <u>Factor 4- Behaviour/ Conduct scale</u>	
12. Often fights with other children or bullies them.	.53
18. Often lies or cheats.	.41
22. Steals from home, school or elsewhere.	.45
19. <i>Picked on or bullied by other children.</i>	.38
23. <i>Gets on better with adults than with other children.</i>	.22

Loading on factorFactor 5- Interpersonal scale

6. Rather solitary, tends to play alone.	-.35
21. Thinks things out before acting.	.57

Items in italic theoretically belong to another scale.

Appendix L3

Strengths and Difficulties Questionnaire- Teacher Version

Total scale: (alpha=.75)

Emotional scale (alpha=.68)

- 3. Often complains of headaches, stomach-aches or sickness. (alpha=.30)
- 8. Many worries, often seems worried. (.45)
- 13. Often unhappy, down-hearted or tearful. (.44)
- 16. Nervous or clingy in new situations, easily loses confidence. (.52)
- 24. Many fears, easily scared. (.45)

Behaviour scale (alpha= .78)

- 5. Often has temper tantrums or hot tempers. (.67)
- 7. Generally obedient, usually does what adults request. (.43)*
- 12. Often fights with other children or bullies them. (.64)
- 18. Often lies or cheats.(.54)
- 22. Steals from home, school or elsewhere. (.26)*

Hyperactivity scale (alpha= .79)

- 2. Restless, overactive, cannot stay still for long. (.62)
- 10. Constantly fidgeting or squirming. (.61)
- 15. Easily distracted, concentration wanders. (.60)
- 21. Thinks things out before acting. (.47)
- 25. Sees tasks through to the end, good attention span. (.53)

Interpersonal scale (alpha= .53)

- 6. Rather solitary, tends to play alone. (.31)
- 11. Has at least one good friend. (.33)
- 14. Generally liked by other children. (.34)
- 19. Picked on or bullied by other children. (.28)
- 23. Gets on better with adults than with other children. (.19)*

Prosocial Scale (alpha= .77)

- 1. Considerate of other people's feelings. (.50)
- 4. Shares readily with other children (treats, toys, pencils, etc). (.50)
- 9. Helpful if someone is hurt, upset or feeling ill. (.63)
- 17. Kind to younger children. (.47)
- 20. Often volunteers to help others (parents, teachers, other children). (.59)

Total Problems Scale (Sum of the Emotional, Behavioral, Hyperactivity and Interpersonal subscales) (alpha= .87)

2. Restless, overactive, cannot stay still for long. (corrected item total correlation= .56)
3. Often complains of headaches, stomach-aches or sickness. (.23)
5. Often has temper tantrums or hot tempers. (.59)
6. Rather solitary, tends to play alone. (.25)*
7. Generally obedient, usually does what adults request. (.49)
8. Many worries, often seems worried. (.52)
10. Constantly fidgeting or squirming. (.57)
11. Has at least one good friend. (.30)
12. Often fights with other children or bullies them. (.60)
13. Often unhappy, down-hearted or tearful. (.42)
14. Generally liked by other children. (.39)
15. Easily distracted, concentration wanders. (.61)
16. Nervous or clingy in new situations, easily loses confidence. (.55)
18. Often lies or cheats. (.61)
19. Picked on or bullied by other children. (.52)
21. Thinks things out before acting. (.41)
22. Steals from home, school or elsewhere. (.25)
23. Gets on better with adults than with other children. (.14)*
24. Many fears, easily scared. (.35)
25. Sees tasks through to the end, good attention span. (.49)

* *Item deleted*

Appendix L4

Factor Structure: SDQ- Teacher Version

<u>Factor 1- Behaviour Scale</u>	<u>Loading on factor</u>
5. Often has temper tantrums or hot tempers.	.69
7. Generally obedient, usually does what adults request.	.39
12. Often fights with other children or bullies them.	.80
18. Often lies or cheats.	.56
22. Steals from home, school or elsewhere.	.27
2. <i>Restless, overactive, cannot stay still for long.</i>	.57
19. <i>Picked on or bullied by other children.</i>	.47
 <u>Factor 2- Prosocial Scale</u>	
1. Considerate of other people's feelings.	-.55
4. Shares readily with other children (treats, toys, pencils, etc).	-.57
9. Helpful if someone is hurt, upset or feeling ill.	-.76
17. Kind to younger children.	-.51
20. Often volunteers to help others (parents, teachers, other children).	-.70
11. <i>Has at least one good friend.</i>	.46
14. <i>Generally liked by other children.</i>	.44
 <u>Factor 3- Emotional Scale</u>	
3. Often complains of headaches, stomach-aches or sickness.	.36
8. Many worries, often seems worried.	.47
13. Often unhappy, down-hearted or tearful.	.52
16. Nervous or clingy in new situations, easily loses confidence.	.53
24. Many fears, easily scared.	.52
6. <i>Rather solitary, tends to play alone.</i>	.65
23. <i>Gets on better with adults than with other children.</i>	.32
 <u>Factor 4- Hyperactivity Scale</u>	
15. Easily distracted, concentration wanders.	.55
21. Thinks things out before acting.	.50
25. Sees tasks through to the end, good attention span.	.71
 <u>Factor 5-</u>	
10. Constantly fidgeting or squirming.	.83

Items in italic theoretically belong to another scale.

Appendix M1

Factor Loadings of the Items of the Peer Assessment

	Factor Loadings		
	Factor 1	Factor 2	Factor 3
Factor 1			
1. Starts fights	.93	.06	.09
2. Is disruptive	.89	.08	.15
3. Angers easily	.82	.17	.06
Factor 2			
4. Is cooperative	-.17	.63	.39
5. Is a leader	.19	.85	-.02
6. Good at sports	.22	.85	.06
Factor 3			
8. Appears unhappy	.09	.19	.82
10. Plays alone	.18	-.01	.86

Principal Component Analysis with varimax rotation.

N=224. Factor 1 accounts for 29.74% of the variance. Factor 2 accounts for 19.218% of the variance. Factor 3 accounts for 16.03% of the variance. Factor 4 accounts for 10.26% of the variance.

Appendix M2

Sociometric Choice Nomination scales

Corrected Item Total CorrelationFactor 1: Aggression (alpha=.86)

Starts fights	.85
Is disruptive	.81
Angers easily	.66

Factor 2: Prosocial Behaviour (alpha=.77)

Is cooperative*	.40
Is a leader/ demonstrates leadership	.59
Good at sports/ athletic	.63

Factor 3: Social Isolation (alpha=.64)

Appears unhappy	.52
Plays alone	.52

* *Items were deleted*

Appendix N1

Self-perception Profile for ChildrenScholastic Competence (alpha= .52)

7. Some kids feel that they are very good at their school work but other kids worry about whether they can do the school work assigned to them. (corrected item total correlation= .11) *
51. Some kids feel like they are just as smart as other kids their age but other kids aren't so sure and wonder if they are as smart. (.28)
66. Some kids are pretty slow in finishing their school work but other kids can do their school work quickly. (.32)
47. Some kids often forget what they learn but other kids can remember things easily. (.26)
17. Some kids do very well at their class work but other kids don't do very well at their class work. (.24)
21. Some kids have trouble figuring out the answers in school but other kids almost always can figure out the answers. (.30)

Social Acceptance: (alpha= .40)

26. Some kids find it hard to make friends but other kids find it's pretty easy to make friends. (corrected item total correlation= .12)
8. Some kids have a lot of friends but other kids don't have very many friends. (.03)*
14. Some kids would like to have a lot more friends but other kids have as many friends as they want. (.13)*
20. Some kids are always doing things with a lot of kids but other kids usually do things by themselves. (-.00)*
26. Some kids wish that more people their age liked them but other kids feel that most people their age do like them. (.22)
32. Some kids are popular with others their age but other kids are not very popular. (.30)

Athletic Competence: (alpha= .42)

3. Some kids do very well at all kinds of sports but other kids don't feel that they are very good when it comes to sports. (corrected item total correlation= .29)
9. Some kids wish they could be a lot better at sports but other kids feel they are good enough at sports. (.21)
15. Some kids think they could do well at just about any new sports activity they haven't tried before but other kids are afraid they might not do well at sports they haven't ever tried. (.21)
21. Some kids feel that they are better than others their age at sports but other kids don't feel they can play as well. (.08)*

- 27. In games and sports some kids usually watch instead of play but other kids usually play rather than just watch. (.07)*
- 33. Some kids don't do well at new outdoor games but other kids are good at new games right away. (.19)

Physical Appearance: (alpha= .79)

- 4. Some kids are happy with the way they look but other kids are not happy with the way they look. (corrected item total correlation= .30)*
- 10. Some kids are happy with their height and weight but other kids wish their height and weight were different. (.35)*
- 16. Some kids wish their body was different but other kids like their body the way it is. (.54)
- 22. Some kids wish their physical appearance (how they look) was different but other kids like their physical appearance the way it is. (.67)
- 28. Some kids wish something about their face or hair looked different but other kids like their face and hair the way they are. (.51)
- 34. Some kids think that they are good looking but other kids think that they are not very good looking. (.14)*

Behavioral Conduct: (alpha= .72)

- 5. Some kids often do not like the way they behave but other kids usually like the way they behave. (corrected item total correlation= .18)*
- 11. Some kids usually do the right thing but other kids often don't do the right thing. (.35)
- 17. Some kids usually act the way they know they are supposed to but other kids often don't act the way they are supposed to. (.39)
- 23. Some kids usually get in trouble because of things they do but other kids usually don't do things that get them in trouble. (.48)
- 29. Some kids do things they know they shouldn't do but other kids hardly ever do things they know they shouldn't do. (.54)
- 35. Some kids behave themselves very well but other kids often find it hard to behave themselves. (.48)

Global Self-Worth: (alpha= .57)

- 6. Some kids are often unhappy with themselves but other kids are pretty pleased with themselves. (corrected item total correlation= .39)
- 12. Some kids don't like the way they are leading their life but other kids do like the way they are leading their life. (.45)
- 18. Some kids are happy with themselves as a person but other kids are often not happy with themselves. (.28)
- 24. Some kids like the kind of person they are but other kids often wish they were someone else. (.18)*

- 30. Some kids are very happy the way they are but other kids wish they were different. (.31)
- 36. Some kids are not very happy with the way they do a lot of things but other kids think the way they do things is fine. (.26)

Total Self-Perception (alpha= .83)

- 1. Some kids feel that they are very good at their school work but other kids worry about whether they can do the school work assigned to them. (corrected item total correlation= .07)*
- 52. Some kids feel like they are just as smart as other kids their age but other kids aren't so sure and wonder if they are as smart. (.19)
- 67. Some kids are pretty slow in finishing their school work but other kids can do their school work quickly. (.36)
- 48. Some kids often forget what they learn but other kids can remember things easily. (.42)
- 17. Some kids do very well at their class work but other kids don't do very well at their class work. (.32)
- 21. Some kids have trouble figuring out the answers in school but other kids almost always can figure out the answers. (.34)
- 26. Some kids find it hard to make friends but other kids find it's pretty easy to make friends. (.30)
- 9. Some kids have a lot of friends but other kids don't have very many friends. (.16)
- 15. Some kids would like to have a lot more friends but other kids have as many friends as they want. (.09)*
- 21. Some kids are always doing things with a lot of kids but other kids usually do things by themselves. (.03)*
- 27. Some kids wish that more people their age liked them but other kids feel that most people their age do like them. (.38)
- 33. Some kids are popular with others their age but other kids are not very popular. (.47)
- 4. Some kids do very well at all kinds of sports but other kids don't feel that they are very good when it comes to sports. (.28)
- 10. Some kids wish they could be a lot better at sports but other kids feel they are good enough at sports. (.19)
- 16. Some kids think they could do well at just about any new sports activity they haven't tried before but other kids are afraid they might not do well at sports they haven't ever tried. (.26)
- 22. Some kids feel that they are better than others their age at sports but other kids don't feel they can play as well. (.10)*
- 28. In games and sports some kids usually watch instead of play but other kids usually play rather than just watch. (.12)*
- 34. Some kids don't do well at new outdoor games but other kids are good at new games right away. (.37)

5. Some kids are happy with the way they look but other kids are not happy with the way they look. (.43)
11. Some kids are happy with their height and weight but other kids wish their height and weight were different. (.32)
17. Some kids wish their body was different but other kids like their body the way it is. (.51)
23. Some kids wish their physical appearance (how they look) was different but other kids like their physical appearance the way it is. (.55)
29. Some kids wish something about their face or hair looked different but other kids like their face and hair the way they are. (.44)
35. Some kids think that they are good looking but other kids think that they are not very good looking. (.28)
6. Some kids often do not like the way they behave but other kids usually like the way they behave. (.25)
12. Some kids usually do the right thing but other kids often don't do the right thing. (.37)
18. Some kids usually act the way they know they are supposed to but other kids often don't act the way they are supposed to. (.32)
24. Some kids usually get in trouble because of things they do but other kids usually don't do things that get them in trouble. (.38)
30. Some kids do things they know they shouldn't do but other kids hardly ever do things they know they shouldn't do. (.37)
36. Some kids behave themselves very well but other kids often find it hard to behave themselves. (.36)
7. Some kids are often unhappy with themselves but other kids are pretty pleased with themselves. (.33)
13. Some kids don't like the way they are leading their life but other kids do like the way they are leading their life. (.39)
19. Some kids are happy with themselves as a person but other kids are often not happy with themselves. (.23)
25. Some kids like the kind of person they are but other kids often wish they were someone else. (.32)
31. Some kids are very happy the way they are but other kids wish they were different. (.39)
37. Some kids are not very happy with the way they do a lot of things but other kids think the way they do things is fine. (.20)

* *Item deleted*

Appendix N2

Higher Order Factor Analysis: Self-Perception Profile for ChildrenFactor 1: Social and Personal Self-Perception (alpha= .80)

	<u>Loading on factor</u>
Social Acceptance Scale	.60
Physical Appearance Scale	.84
Global Self-Worth Scale	.85

Factor 2: School and Athletic Self-Perception (alpha= .72)

Scholastic Scale	.78
Athletic Competence Scale	.80
Behavioural Conduct Scale	.56

Appendix N3

Self-perception scalesSchool and Athletic Self-Perception (alpha= .72)

37. Some kids feel that they are very good at their schoolwork but other kids worry about whether they can do the schoolwork assigned to them.(corrected item total correlation=.22) *
7. Some kids feel like they are just as smart as other kids their age but other kids aren't so sure and wonder if they are as smart. (.22)
68. Some kids are pretty slow in finishing their school work but other kids can do their school work quickly. (.38)
49. Some kids often forget what they learn but other kids can remember things easily. (.36)
17. Some kids do very well at their class work but other kids don't do very well at their class work. (.31)
21. Some kids have trouble figuring out the answers in school but other kids almost always can figure out the answers. (.34)
3. Some kids do very well at all kinds of sports but other kids don't feel that they are very good when it comes to sports. (.30)
11. Some kids wish they could be a lot better at sports but other kids feel they are good enough at sports. (.22)*
17. Some kids think they could do well at just about any new sports activity they haven't tried before but other kids are afraid they might not do well at sports they haven't ever tried. (.28)
23. Some kids feel that they are better than others their age at sports but other kids don't feel they can play as well. (.13) *
29. In games and sports some kids usually watch instead of play but other kids usually play rather than just watch. (.09) *
35. Some kids don't do well at new outdoor games but other kids are good at new games right away. (.31)
7. Some kids often do not like the way they behave but other kids usually like the way they behave. (.20) *
13. Some kids usually do the right thing but other kids often don't do the right thing. (.29)
19. Some kids usually act the way they know they are supposed to but other kids often don't act the way they are supposed to. (.37)
25. Some kids usually get in trouble because of things they do but other kids usually don't do things that get them in trouble. (.41)
31. Some kids do things they know they shouldn't do but other kids hardly ever do things they know they shouldn't do. (.45)

37. Some kids behave themselves very well but other kids often find it hard to behave themselves. (.41)

Social and Personal Self-Perception (alpha= .80)

26. Some kids find it hard to make friends but other kids find it's pretty easy to make friends. (corrected item total correlation= .26) *
10. Some kids have a lot of friends but other kids don't have very many friends. (.14) *
16. Some kids would like to have a lot more friends but other kids have as many friends as they want. (.12) *
22. Some kids are always doing things with a lot of kids but other kids usually do things by themselves. (.07) *
28. Some kids wish that more people their age liked them but other kids feel that most people their age do like them. (.32)
34. Some kids are popular with others their age but other kids are not very popular. (.42)
6. Some kids are happy with the way they look but other kids are not happy with the way they look. (.37)
12. Some kids are happy with their height and weight but other kids wish their height and weight were different. (.35)
18. Some kids wish their body was different but other kids like their body the way it is. (.62)
24. Some kids wish their physical appearance (how they look) was different but other kids like their physical appearance the way it is. (.66)
30. Some kids wish something about their face or hair looked different but other kids like their face and hair the way they are. (.50)
36. Some kids think that they are good looking but other kids think that they are not very good looking. (.19) *
8. Some kids are often unhappy with themselves but other kids are pretty pleased with themselves. (.43)
14. Some kids don't like the way they are leading their life but other kids do like the way they are leading their life. (.43)
20. Some kids are happy with themselves as a person but other kids are often not happy with themselves. (.19) *
26. Some kids like the kind of person they are but other kids often wish they were someone else. (.34)
32. Some kids are very happy the way they are but other kids wish they were different. (.44)
38. Some kids are not very happy with the way they do a lot of things but other kids think the way they do things is fine. (.20) *

* item was deleted

Total Self-Perception scale (alpha= .81)

1. Some kids feel that they are very good at their schoolwork but other kids worry about whether they can do the schoolwork assigned to them.(corrected item total correlation= .13) *
2. Some kids find it hard to make friends but other kids find it's pretty easy to make friends. (.29)
3. Some kids do very well at all kinds of sports but other kids don't feel that they are very good when it comes to sports. (.32)
4. Some kids are happy with the way they look but other kids are not happy with the way they look. (.41)
5. Some kids often do not like the way they behave but other kids usually like the way they behave. (.21)
7. Some kids feel like they are just as smart as other kids their age but other kids aren't so sure and wonder if they are as smart. (.20) *
8. Some kids have a lot of friends but other kids don't have very many friends. (.16) *
9. Some kids wish they could be a lot better at sports but other kids feel they are good enough at sports. (.19) *
10. Some kids are happy with their height and weight but other kids wish their height and weight were different. (.32)
11. Some kids usually do the right thing but other kids often don't do the right thing. (.38) *
13. Some kids are pretty slow in finishing their school work but other kids can do their school work quickly. (.37)
14. Some kids would like to have a lot more friends but other kids have as many friends as they want. (.09) *
15. Some kids think they could do well at just about any new sports activity they haven't tried before but other kids are afraid they might not do well at sports they haven't ever tried. (.32)
16. Some kids wish their body was different but other kids like their body the way it is. (.42)
17. Some kids usually act the way they know they are supposed to but other kids often don't act the way they are supposed to. (.34)
19. Some kids often forget what they learn but other kids can remember things easily. (.39)
20. Some kids are always doing things with a lot of kids but other kids usually do things by themselves. (.01)*
21. Some kids feel that they are better than others their age at sports but other kids don't feel they can play as well. (.12) *
22. Some kids wish their physical appearance (how they look) was different but other kids like their physical appearance the way it is. (.48)
23. Some kids usually get in trouble because of things they do but other kids usually don't do things that get them in trouble. (.38)
25. Some kids do very well at their class work but other kids don't do very well at their class work. (.40)

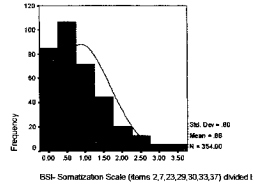
26. Some kids wish that more people their age liked them but other kids feel that most people their age do like them. (.40)
27. In games and sports some kids usually watch instead of play but other kids usually play rather than just watch. (.12) *
28. Some kids wish something about their face or hair looked different but other kids like their face and hair the way they are. (.38)
29. Some kids do things they know they shouldn't do but other kids hardly ever do things they know they shouldn't do. (.38)
31. Some kids have trouble figuring out the answers in school but other kids almost always can figure out the answers. (.33)
32. Some kids are popular with others their age but other kids are not very popular. (.46)
33. Some kids don't do well at new outdoor games but other kids are good at new games right away. (.37)
34. Some kids think that they are good looking but other kids think that they are not very good looking. (.31)
35. Some kids behave themselves very well but other kids often find it hard to behave themselves. (.37)

** items deleted*

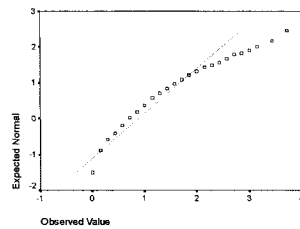
Appendix O

BSI- Somatization

BSI- Somatization Scale (items 2,7,23,29,

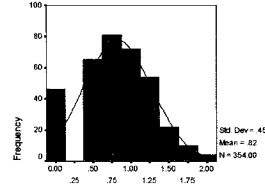


Normal Q-Q Plot of BSI- Somatization Scale



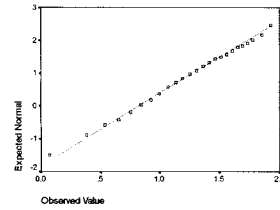
S=7.41 K=3.59

SQRT (somatiza)



SQRT (somatiza)

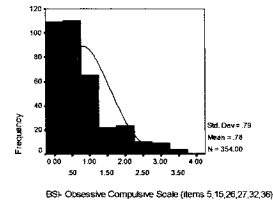
Normal Q-Q Plot of SQRT somatization sca



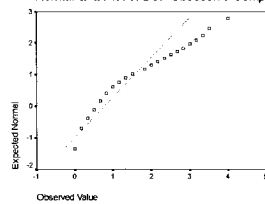
S= .06 K=1.06

BSI- Obsessive-Compulsive

BSI- Obsessive Compulsive Scale (items

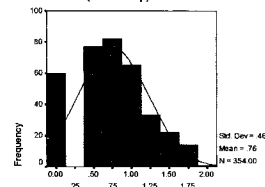


Normal Q-Q Plot of BSI- Obsessive Comp



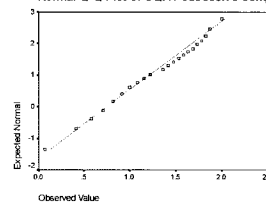
S=8.49 K=4.8

SQRT (obs.comp)



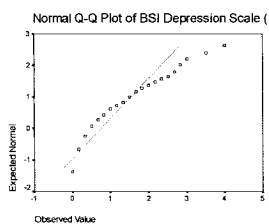
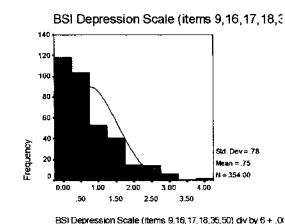
SQRT (obs.comp)

Normal Q-Q Plot of SQRT obsessive comp

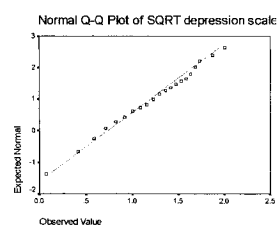
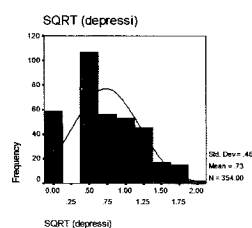


S=0.256 K=1.3

BSI-Depression

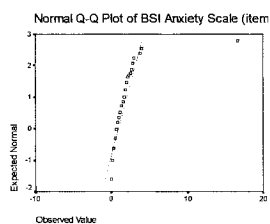
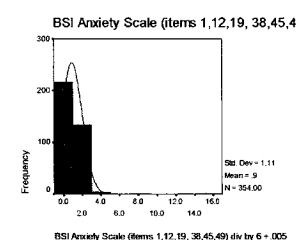


S=10.27 K=8.98

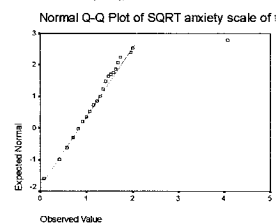
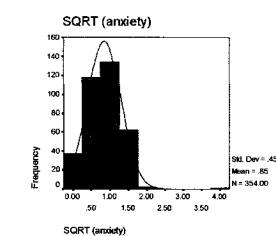


S=1.27 K=0.35

BSI-Anxiety

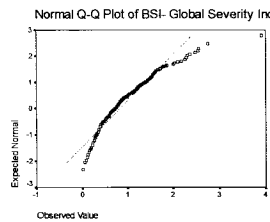
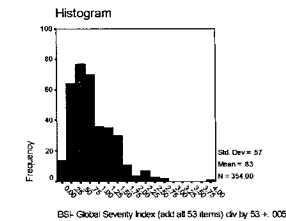


S=5.9 K=1.19

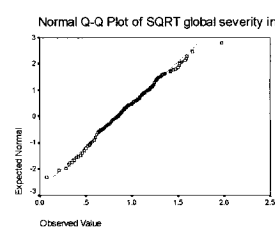
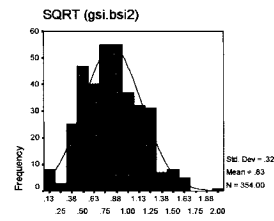


S=0.8 K=1.82

BSI-Global Severity Index

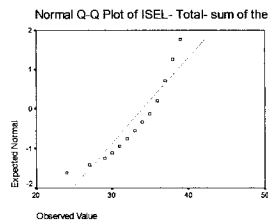
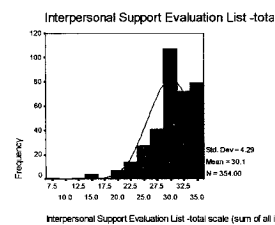


S=6.73 K=3.91

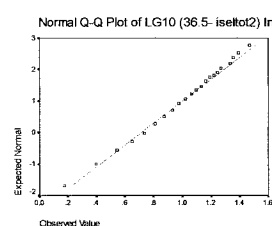
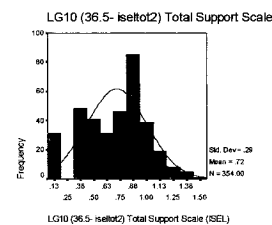


S=0.30 K=0.38

Interpersonal Support Evaluation List-Total



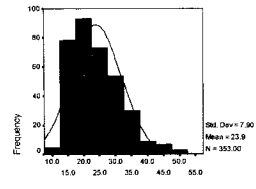
S=6.78 K=5.22



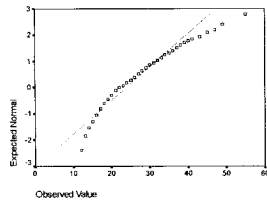
S=0.256 K=1.46

PSI- Parenting Distress

PSI- Parenting Distress Scale (items 1-12)

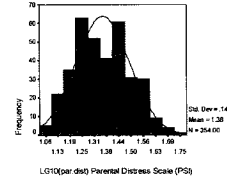


Normal Q-Q Plot of PSI- Parenting Distress

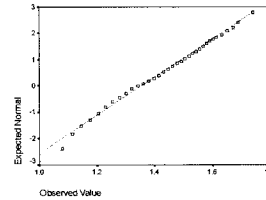


S=3.94 K=0.97

LG10(par.dist) Parental Distress Scale (PS)



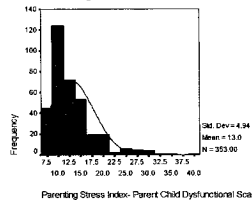
Normal Q-Q Plot of Log 10 of parenting dist



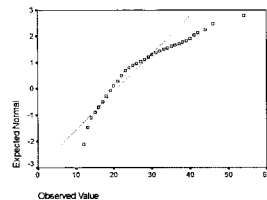
S=1.12 K=1.33

PSI-Parent-Child Difficult Interaction

Parenting Stress Index- Parent Child Dysf

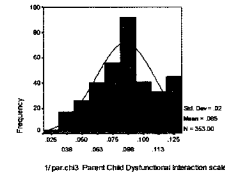


Normal Q-Q Plot of Parent-Child Difficult Int

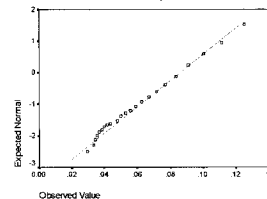


S=6.82 K=3.6

1/ par.chi3 Parent Child Dysfunctional Int



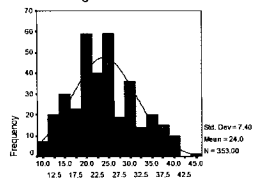
Normal Q-Q Plot of 1/ par.chi3 Parent Child



S=0.7 K=1.66

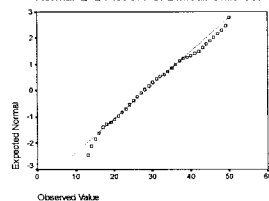
PSI-Difficult Child Scale

Parenting Stress Index- Difficult Child Scale



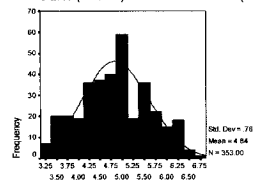
Parenting Stress Index- Difficult Child Scale- (sum of items 2)

Normal Q-Q Plot of PSI Difficult Child Scale



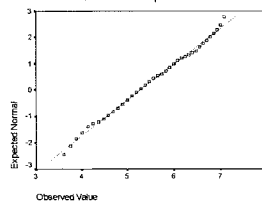
S=1.47 K=1.48

SQRT (dif.chi3) Difficult Child Scale (PSI)



SQRT (dif.chi3) Difficult Child Scale (PSI)

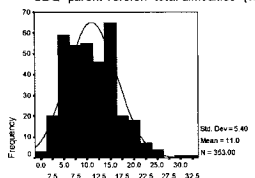
Normal Q-Q Plot of Square root of difficult c



S=0.44 K=1.30

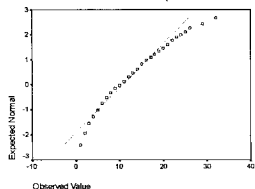
SDQ-Total Difficulties (Parent version)

SDQ- parent version- total difficulties- (with



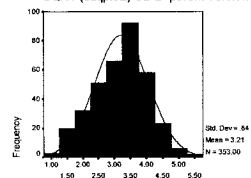
SDQ- parent version- total difficulties- (with item 5 deleted)

Normal Q-Q Plot of SDQ- parent version- tc



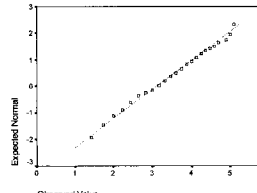
S=3.83 K=0.2

SQRT (sdqpto2) SDQ- parent version- tot



SQRT (sdqpto2) SDQ- parent version- total difficulties scale

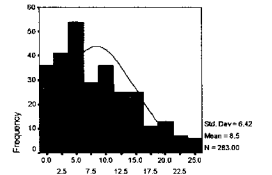
Normal Q-Q Plot of SQRT (sdqpto2) SDQ- t



S=0.46 K=1.07

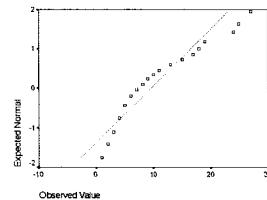
SDQ- Total Difficulties (Teacher Version)

SDQ- teacher version- total difficulties sca



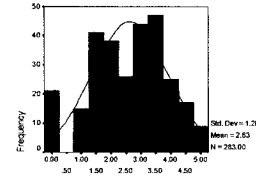
SDQ- teacher version- total difficulties scale with items 6 and 7

Normal Q-Q Plot of SDQ-teacher version- t



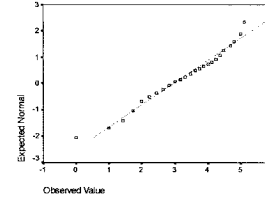
S=4.55 K=0.83

SQRT (sdqto2) SDQ- teacher version- tot



SQRT (sdqto2) SDQ- teacher version- total difficulties scale

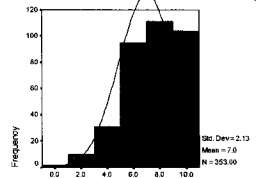
Normal Q-Q Plot of SQRT (sdqto2) SDQ- t



S=0.86 K=0.84

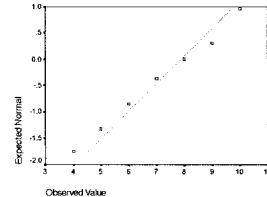
SDQ-Prosocal Scale (Parent version)

SDQ- Parent Version- Prosocial Scale (ite



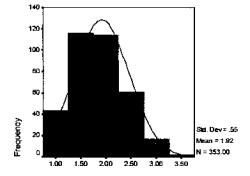
SDQ- Parent Version- Prosocial Scale (items 1, 4, 9, 17, 20)

Normal Q-Q Plot of SDQ Parent Version- P



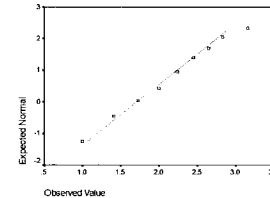
S=4.2 K=0.32

SQRT (11- sdqp.pro) SDQ parent version



SQRT (11- sdqp.pro) SDQ parent version prosocial scale

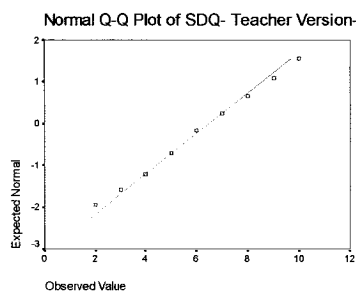
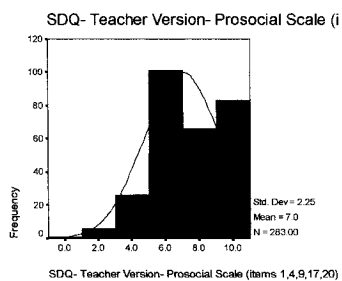
Normal Q-Q Plot of SQRT (11- sdqp.pro) S



S=1.02 K=1.35

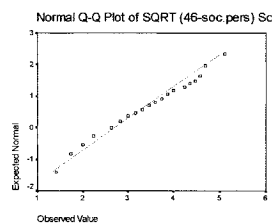
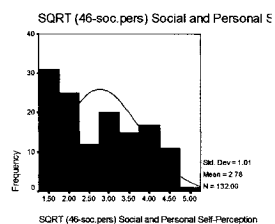
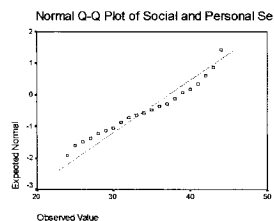
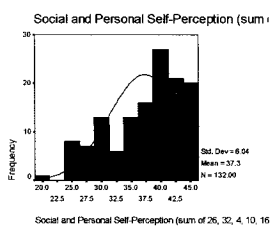
SDQ-Prosocial scale (Teacher version)

no transformation



S=.089 K=2.12

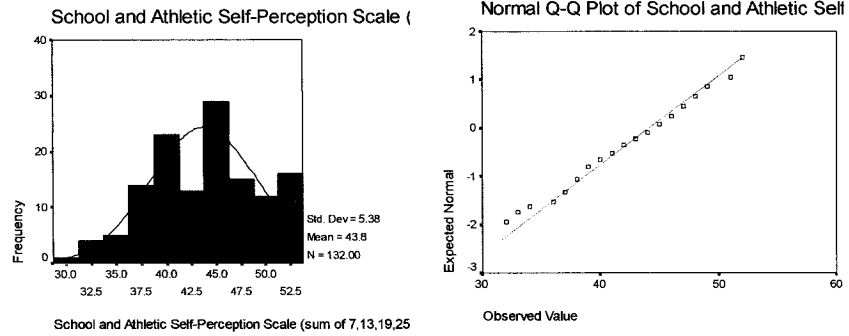
Social and Personal Self-Perception



S=1.78 K=1.68

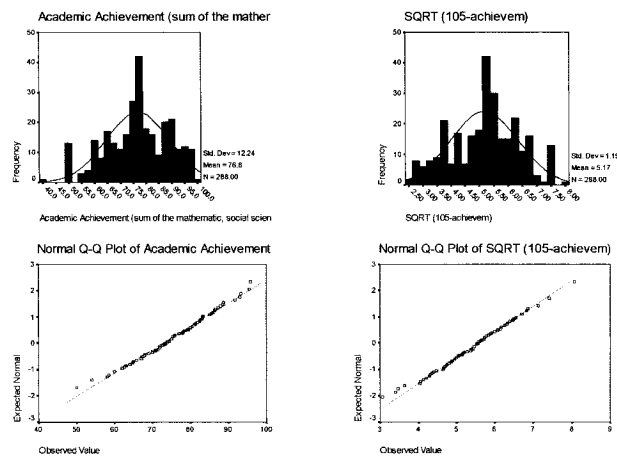
School and Athletic Self-Perception

no transformation



S=1.36 K=0.98

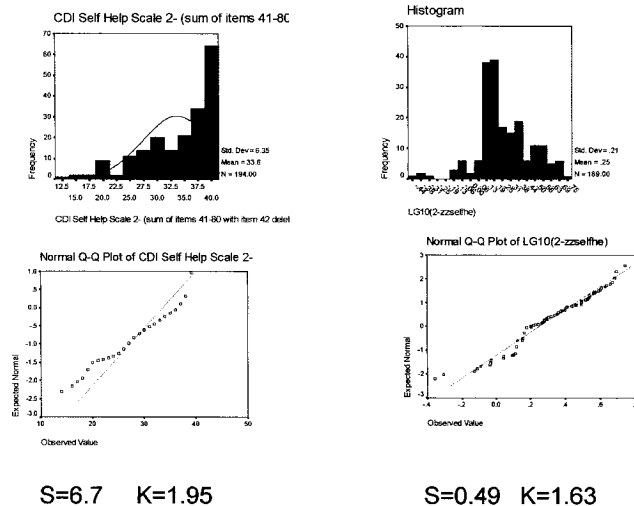
Academic Achievement



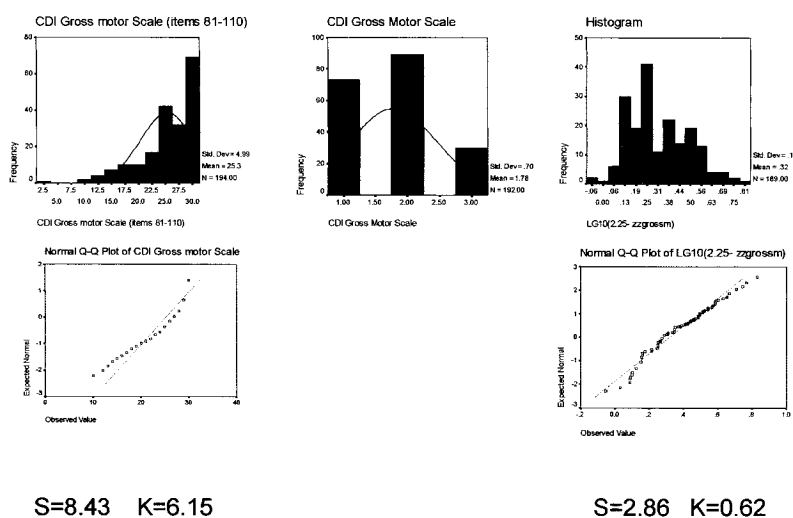
S=7.79 K=2.27

S=1.02 K=1.7

CDI-Self-Help Scale

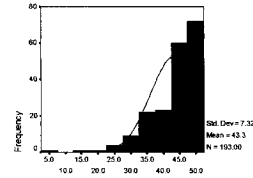


CDI-Gross Motor scale

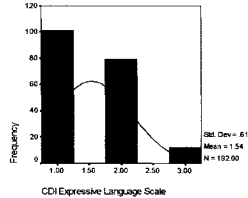


CDI-Expressive Language scale

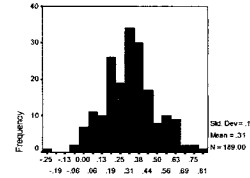
CDI Expressive Language Scale (items 14)



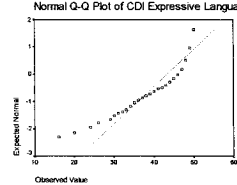
CDI Expressive Language Scale



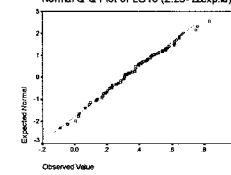
Histogram



Normal Q-Q Plot of CDI Expressive Language



Normal Q-Q Plot of LG10 (2.25-zzexp.la)

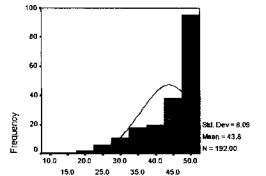


S= 10 K=11.4

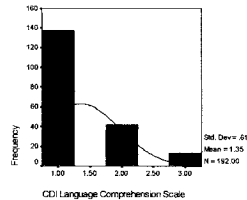
S=0.87 K=0.42

CDI-Language Comprehension scale

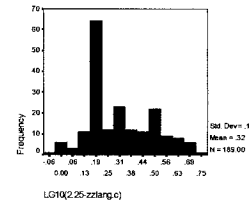
CDI Language Comprehension Scale (item)



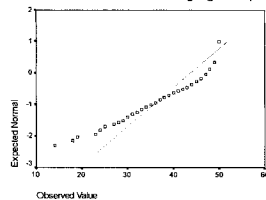
CDI Language Comprehension Scale



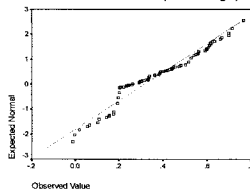
Histogram



Normal Q-Q Plot of CDI Language Comprehension



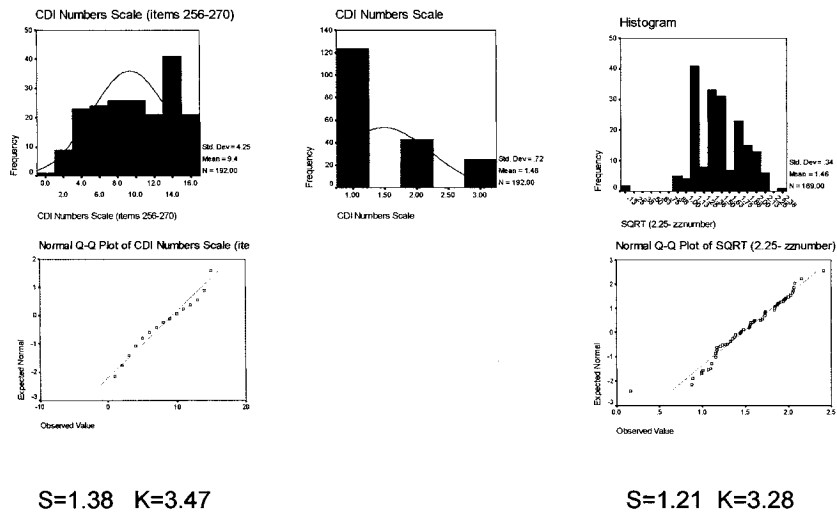
Normal Q-Q Plot of LG10(2.25-zzlang.c)



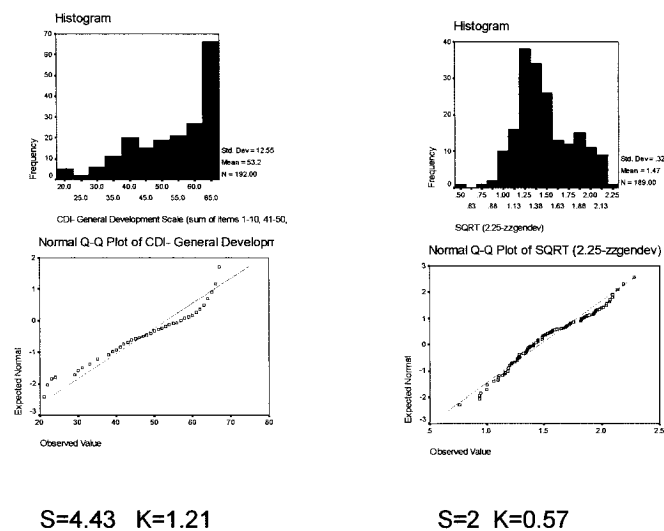
S=9 K= 6.39

S=2.62 K=1.7

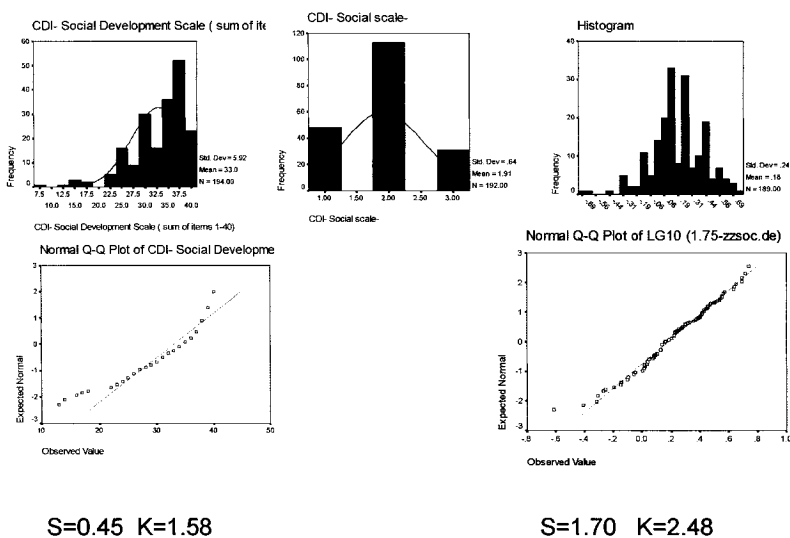
CDI- Numbers scale



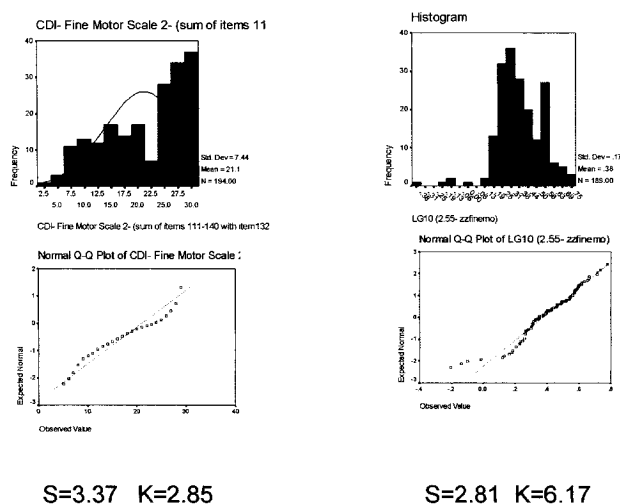
CDI-General Development



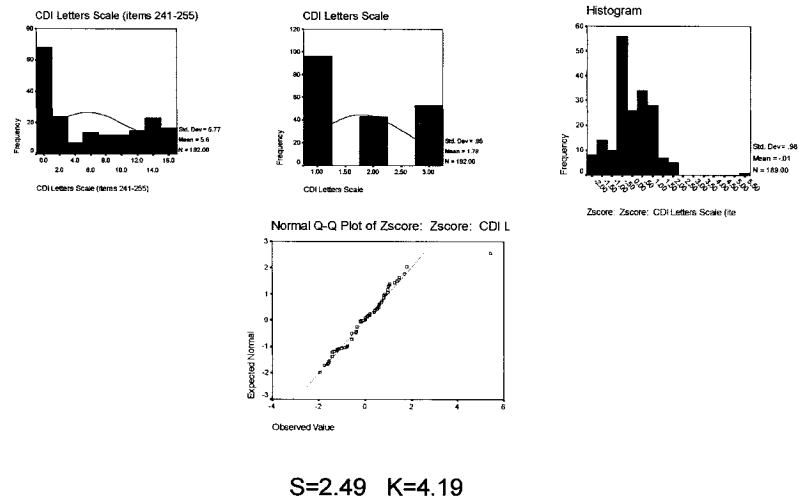
CDI-Social scale- no transformation



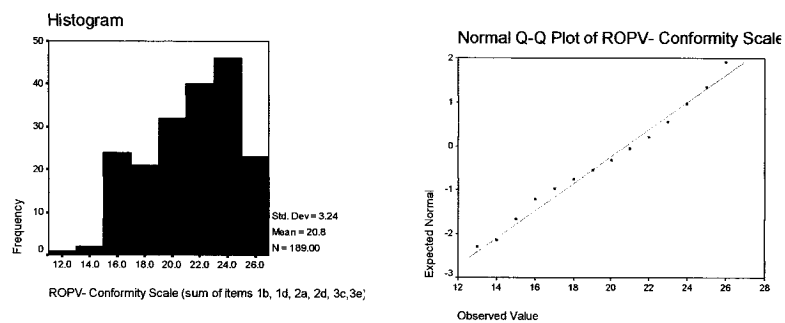
CDI-Fine Motor Scale (no transformation)



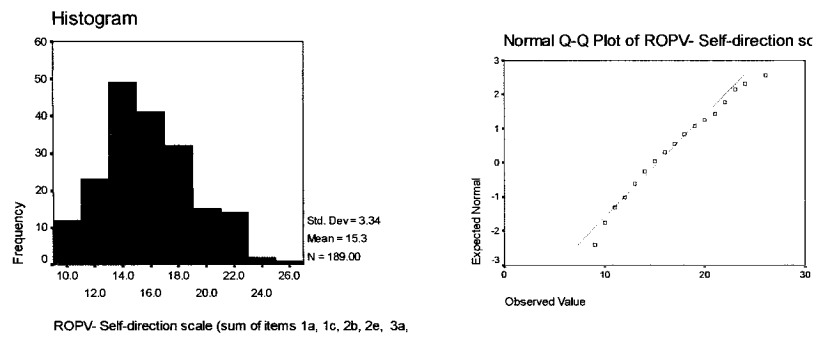
CDI-Letters scale- no transformation



ROPV- Conformity



ROPV-Self-Direction



Appendix P

BSI scales: T scores calculated using the non patient adult female norms

BSI scales	Campos				San Cristobal			
	T score <60	<70	<80	>80	T score <60	<70	<80	>80
Somatization scale	49.1%	41.2%	4.2%	5.5%	47.1%	42.3%	3.2%	7.4%
Obsessive-Compulsive scale	75.2%	18.7%	5.5%	.6%	65.1%	32.5%	6.3%	1.1%
Depression scale	57.3%	32.9%	9.2%	.6%	60%	35.7%	3.8%	.5%
Anxiety scale	64.8%	32.8%	1.2%	1.2%	57.5%	37.5%	4.3%	.5%
Global Severity Index	46.7%	40.32%	12.4%	.6%	46.5%	37.3%	13.5%	2.7%