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ANTECEDENTS OF MOTHERS' CHILD-REARING ATTITUDES AND
BEHAVIORS REGARDING ACHIEVEMENT EXPECTATIONS:
A HOLISTIC STUDY UTILIZING THE THEORY OF PLANNED BEHAVIOR

By

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A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Family and Child Ecology

1996

ABSTRACT

ANTECEDENTS OF MOTHERS' CHILD-REARING ATTITUDES AND BEHAVIORS REGARDING ACHIEVEMENT EXPECTATIONS: A HOLISTIC STUDY UTILIZING THE THEORY OF PLANNED BEHAVIOR

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The purposes of this study were to find out how general beliefs, cultural factors, and parental self-esteem affect mothers' specific child-rearing attitudes, and how these attitudes lead to certain child-rearing behaviors regarding expectations of achievement. Two theories were utilized in this study: Ajzen's theory of planned behavior (1985) and Bronfenbrenner's ecological theory of human development (1979). The sample consisted of 356 mothers of the four- to six-year-old preschoolers in Taiwan. In addition to the basic inferential statistics, confirmatory factor analyses and path analyses were also conducted.

The theory of planned behavior was tested as the basic model. Two separate path analyses were conducted, one for the category of scholastic orientation expectations, the other for the category of activity orientation expectations. The model was partially supported in both categories. Mothers' subjective norms and attitudes would affect their behavioral intentions, thus, their actual child-rearing behaviors. Mothers' perceived behavioral control did not have significant influences on their behavioral intentions. This indicated that more efforts would be needed to determine whether any

adjustment of the theory of planned behavior would be necessary in order to better predict mothers' child-rearing behaviors from their attitudes as well as other related factors.

In addition to the basic model, several contextual variables, as well as antecedents of mothers' subjective norms, attitudes, and perceived behavioral control, were added. Relationships between these variables and the basic model were examined. The results showed that 1) a higher degree of collectivism led to more favorable subjective norms, 2) mothers' general beliefs (regarding family life, parenting, and marital relationship) would affect their specific child-rearing attitudes, and 3) mothers' sense of parenting competence would affect their perceived behavioral control.

To: My Husband

My Parents

ACKNOWLEDGMENTS

There are certain people who have meaningfully contributed to the process of my doctoral program as well as this dissertation. I am especially grateful to my mentor and the chairperson of my guidance committee, Dr. Robert Boger, for his inspiration, continuous support, guidance, and encouragement throughout my doctoral program.

Sincere appreciation is extended to other members of my guidance committee:

To Dr. Thomas Luster, for his incisive direction and insightful advice that has been helpful in building my research strength throughout my course of study;

To Dr. Dennis Keefe, for his advice, interest, and support throughout my program;

To Dr. Ralph Levine, Department of Psychology, for his interest and advice, particularly in the areas of research design and data analysis.

Thanks are extended to other professors at the Department of Family and Child Ecology:

To Dr. Lillian Phenice, who served as a mentor to me, for her guidance as well as her teachings throughout my program;

To Dr. Norma Bobbitt and Dr. Lawrence Schiamberg, for their teachings that have inspired me.

I would also like to express my appreciation to Mrs. Carolyn Boger, for her kindness and support in many ways.

I would like to express my gratitude to those who have had great contributions to my dissertation:

To my dear friend, Kai-Han, and my sister-in-laws, Chuan and Shu-Ine, for their assistance in coordinating data collections in Taiwan;

To the kindergartens in Taiwan and those mothers who have participated in this study, for their support and recognition;

To the College of Human Ecology at MSU, for granting me the dissertation fellowship that made this project possible.

Thanks are expressed to my family, and my in-laws, for their continuous support and encouragement from far away.

Finally, I would like to express my deepest appreciation to my husband, for his love, patience and encouragement.

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CHAPTER I

INTRODUCTION

Children's achievement or school performance has been a widely studied topic, particularly in the context of ethnic differences (Lee, Ichikawa, and Stevenson, 1987; Okagaki and Sternberg, 1993; Steinberg, Dornbusch, and Brown, 1992), or cross-national comparisons (Stevenson, Lee, and Stigler, 1986; Stevenson and Lee, 1990; Tuss, Zimmer, and Ho, 1995). Many of these studies demonstrated the strong linkage between parental influence (parental beliefs, home environment, childrearing practice, etc.) and children's achievement (e.g., Banner, 1979; Bartlett and Smith, 1966; Campbell, Goldstein, Schaefer, and Ramey, 1991; Dolan, 1983; Drews and Teahan, 1957; Seginer, 1983; Yao, 1985). Results showed that parents' educational expectations, parental beliefs, or parents' attitude toward academic achievement may have played a significant role.

A well-known work of this connection between parental beliefs, attitudes, or their values and child outcome was done by Kohn (1969). He found that parental beliefs regarding the goals and values for their children were influenced by factors existing in the parents' social context. These values will result in different parenting behaviors, and different

parenting behaviors will lead to different child outcomes. Ogbu (1981) argued that child-rearing practices are a part of a parent's cultural knowledge of their adult tasks, of essential competencies, and the methods of transmitting these competencies to succeeding generations. This implies that parents' child-rearing behavior is based on what parents think of as important things in the culture and society for their children to learn to master and to achieve as their goals. This makes it meaningful to explore how parents choose to "believe" that certain goals or tasks are important for their children to achieve or learn, and why their beliefs vary even within one culture. Based on Kohn's and Ogbu's statements, in order to further understand how and why parents' beliefs and attitudes influence children's achievement, a holistic model including more than parents' specific attitudes regarding child-rearing will be necessary.

To understand how parents' attitudes influence children's achievement, investigations of how attitudes affect parents' child-rearing behaviors are necessary, because parental behavior is the most direct way a parent exerts influence. A great deal of research on attitudes has been conducted. Researchers have focused upon the relationship between people's attitudes and behaviors. If a perfect correlation between people's attitudes and behaviors existed, it would be possible for us to measure any individual's attitude and predict his/her behavior. Because such perfect correlations cannot be found, other factors need to be considered in order

to determine the relationship between people's attitudes and behaviors. Other variables, therefore, need to be identified and measured to help demonstrate how people's attitudes determine their behaviors under given circumstances.

Parents are the most significant figures in children's lives. This is especially the case before children go to school, when they are often the most important source of children's learning and socialization. What parents offer at home helps shape the environment children will grow up in and will become most familiar with over time.

The complexity of the linkage between parents' attitudes and their behaviors toward the child has been addressed in many studies and literature reviews (Goodnow, 1988; Goodnow and Collins, 1990; Miller, 1988; Sigel, 1985, 1986; Youniss, 1994). Goodnow (1988) stated that the idea-behavior consistency is likely to be variable, occurring more often with some people than with others, under certain conditions, and in some spheres rather than in others.

The impact of parental attitudes not only comes from the parent's direct child-rearing behavior, but also comes from the parent's way of arranging the family setting (home environment), and the parent's behaviors not within the parent-child interaction. As indicated by Palacios et al. (1992), the idea-behavior connection has been studied in at least two different domains: in educational situations where a parent teaches his or her child about something and in the way a parent arranges the child's everyday life. The first

domain is referred to as "direct influences," while the second one, "indirect influences."

In this study, the primary focus will be on the domain of direct influences, on the strategies that parents use to motivate the child and to help him/her when facing a difficulty. The key issue explored in this study will be mothers' child-rearing behavior toward their children's achievement. Because in most of the cases these Taiwanese mothers are the primary caregivers, data will be collected for mothers only.

STATEMENT OF THE PROBLEM

This study, therefore, will utilize Ajzen's theory of planned behavior (1985) to examine how mothers' child-rearing attitudes, subjective norms, and perceived behavioral control affect their child-rearing behavioral intentions, and how these intentions, in turn, influence their child-rearing behaviors.

NATURE OF THE PROBLEM

The primary purpose of this research is to find out how general beliefs (regarding parenting, family life, and the marital relationship) affect mothers' specific child-rearing attitudes, and thus lead to certain child-rearing behaviors (regarding expectations for achievement).

Research on parental beliefs and parental attitudes has proceeded in many different directions, and almost all of the traditional topics of child development have been covered from a particular perspective; for example, children's cognitive development, children's social development, and parents' child-rearing orientations. At the beginning, the research interest regarding parental attitudes came from searching for a better way to predict child outcome, but recently, the situation has shifted, and parental attitudes, their beliefs and values have become a research focus by themselves. This study follows this recent research direction and will investigate the path from parental beliefs to child-rearing behaviors regarding achievement expectations as mediated through their child-rearing attitudes and behavioral intentions.

The literature shows an extensive amount of research dealing with the relationship between parental attitudes, parenting behaviors, and child outcomes. When researchers try to explain the linkages between parental attitudes and parenting behaviors, however, the literature is limited. Although it is logical that a person's thinking will affect how he/she acts, it is also true that there are many elements, in addition to individual attitudes, that will predict individual behavior. The existing literature does not reflect research that has measured all of these elements in one study. A gap, therefore, exists in our understanding of the relationship between a person's attitude and his/her behavior.

This study is designed to begin to bridge this gap in the understanding of the links between mothers' child-rearing attitudes and behaviors.

It has been found that a parent's behavior tends to change from context to context, from time to time, and thus is not a very stable variable to measure, or to be used to predict other variables. Goodnow (1988) argued that studying only parents' overt behavior is "to treat them as unthinking creatures, ignoring the fact that they interpret events and have feelings about them" (p. 287). Goodnow's statement implied the need to understand the sources of parents' behaviors, and since parental attitudes are relatively less likely to change dramatically and are more helpful in explaining the underlying reason (intentions) of parent's behaving differently from one situation to the other, this topic has been studied by researchers interested in both parenting practice and the attitudes that lead to the practice.

Studies regarding children's academic achievement or school performance have been done from different perspectives. Some researchers focused on the influences schools, family, or particularly parents have on their children's achievement (Campbell et al., 1990; Dolan, 1983; Drews and Teahan, 1957; Okagaki and Sternberg, 1993; Seginer, 1983; Steinberg, Dornbusch, and Brown, 1992), while others categorize children into under-, average-, and over-achievers, and either compare them with one another or investigate the characteristics of a

particular group (Banner, 1979; Tuss, Zimmer, and Ho, 1995; Yao, 1985). In most of these studies, the influence of parental beliefs or parents' attitudes is included as an element of the study, but the relationship between attitudes and behaviors has not been investigated in depth. Although the importance of parents' attitudes has been emphasized in many studies, the linkage between parents' attitudes and their particular child-rearing behaviors regarding children's achievement and how parents' attitudes are formed is still not clear. More in-depth efforts need to be given to this issue.

In addition to mothers' specific child-rearing attitudes regarding children's achievement, two additional variables that may have influences on their behavioral intentions and child-rearing behaviors are also assessed in this study. They include mothers' subjective norms and their perceived behavioral control. Attitudes alone cannot fully predict mothers' behavioral intentions, because other contextual variables (e.g., limited resources, including money, time and ability) may discourage or deter mothers from carrying out their intentions regarding certain behaviors, even though they hold favorable attitudes toward them.

Mothers' subjective norms represent their perceptions of the attitudes (favorable or not) that other significant people in their lives hold toward certain child-rearing behaviors. If mothers have favorable attitudes but they perceive that other important people in their lives hold negative attitudes toward certain child-rearing behavior, their intention for this

behavior may be affected and they may not take action on this behavior even though they themselves would like to do so.

A mother's perceptions of how much control she has over certain behavior will affect her intentions. It is possible that a mother would like to teach her child to read at home every day. Her attitude toward this, therefore, would be very favorable. However, she might be illiterate or she might have work and not have time to do so. Her resulting intention to teach her child to read would then be low since she knows that she does not have appropriate control of the situation. Mothers' subjective norms and their perceived behavioral control are, therefore, two important predictors, in addition to maternal attitudes, that will affect mothers' intentions to take certain actions to enable their children's achievement. By adding these variables, the researcher will be able to determine not only the factors that directly lead to mothers' intentions for certain child-rearing behavior, but also the relevance of other factors that may make some indirect contributions to mothers' behavioral intentions and resultant behaviors.

To better understand mothers' behavioral intentions and behaviors, three antecedent variables are included in the study: degree of cultural collectivism, general beliefs, and sense of parenting competence, pursuant to the three elements of mothers' behavioral intentions (subjective norms, child-rearing attitudes, and perceived behavioral control). This model is outlined in Figure 1.1.

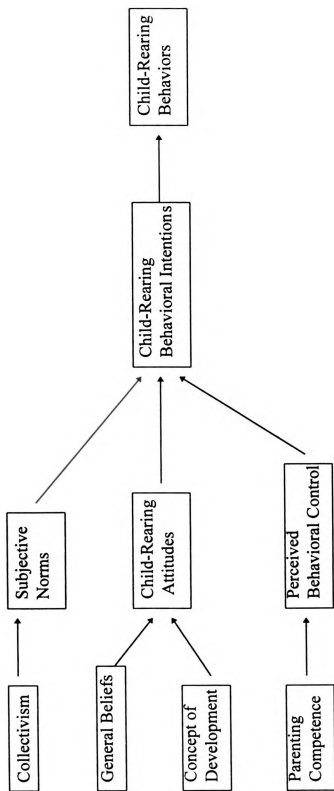


Figure 1.1: A Primary Model for Child-Rearing Attitudes and Behaviors

SIGNIFICANCE OF THE STUDY

As Sameroff (1987) has noted, some system variables (e.g., SES) are not easy to change. By understanding not only parents' attitudes but also how the attitudes are formed, the processes of support and intervention for children, parents, and the family as a whole may be more successful.

Knowing that mothers' subjective norms, specific attitudes, and perceived behavioral control toward child rearing will lead to mothers' behavioral intentions for certain child-rearing behaviors can provide us the picture of "what" the linkages are. To understand "why" and "how" certain subjective norms, attitudes, and perceived behavioral control are formed for some mothers but not for others, further investigation of predictor variables will be necessary. In the present study, antecedent variables of mothers' subjective norms, specific attitudes, and perceived behavioral control (i.e., degree of collectivism, general beliefs, and parenting competence, respectively) will be included and the relationships among these variables will be investigated. With the inclusion of these antecedent variables, researchers will be able to answer the questions of why mothers have certain attitudes, certain subjective norms, or a certain degree of perceived behavioral control, and what kind of antecedent variables combined as a whole have contributed to these.

Besides its uniqueness of utilizing an attitude theory in the study of mothers' attitudes and child-rearing behaviors,

the present study is significant in two other ways: 1) the study is conducted in Taiwan, and 2) the subjects are the mothers of preschoolers in Taiwan.

Some researchers interested in cross-cultural comparisons of children's scholastic achievement have included Taiwan (as well as Japan) in their studies (Stevenson & Lee, 1990). Although parents' ideas about children's achievement were compared across cultures (e.g., how they attribute their children's high or low achievement), no systematic approach was taken to explore parents' thinking and behaviors that could influence their children's achievement. Researchers have been interested in why ethnic differences appear in children's academic achievement in U.S. classrooms. Efforts using a holistic model to explore mothers' ideas extensively regarding achievement in Taiwan provides the first step toward a search for explanations.

It is common for studies of children's academic achievement to look at children of elementary school age or older due to the increased potential of defining academic achievement when there is a report card for reference. The present study chooses to examine the achievement expectations and related behaviors of preschool mothers toward their preschoolers. It may be hard to comprehend, but it is actually the key issue of this research topic. Mothers with four- to six- year-old children were chosen for this study. The older the children are, the closer they are to the time they enter elementary school. In Taiwan, entering the elementary school

has a very significant meaning, i.e., children become "students," and efforts should be put into school work. There will be little time for play or other activities. For mothers with older children facing this important transition for the child, the mothers' attitudes may be facing a transition, too. Mothers will try to prepare their children for the upcoming academic challenge from their schooling as much as possible.

School readiness is very important both to the mothers and to the children. In Taiwan, mothers' ideas about the importance of academic achievement do not begin when their children enter the elementary school; they exist long before their children enter school. There may not be any report card, but the competition that will possibly lead to future achievement is everywhere when children are still in kindergarten. All kinds of after-class (kindergarten) activities are arranged, and most of them are regarded as having the potential of giving the children an early start and assisting children to do better academically in the future. The inclusion of mothers with different age children allows for comparisons to be made. Researchers will be able to find out whether mothers facing the transition of expecting their children to enter elementary school in the near future would have attitudes and other psychological characteristics that are different from other mothers with younger children. Also, the inclusion of mothers' general beliefs regarding family life and children, as well as other factors leading to their behavioral intentions regarding children's academic

achievement, will help explain certain maternal behaviors during later periods.

The results of this study may have implications for intervention. If the school wishes to offer a parent education program, it will be necessary to know what kind of program would be most appropriate for a particular group of parents. The school will need to organize the program so that parents will benefit from it. By understanding parents' attitudes and expectations toward their children, parent education programmers will be able to achieve greater impact.

This study will also be valuable to the first-grade teachers in the elementary schools in Taiwan. They will benefit from knowing the attitudes and expectations parents have for their children before their children enter first grade. As outlined in Bronfenbrenner's model, parent-teacher transactions (communications) form an important dimension of the home/school mesosystem and are very important to the developing child.

This study should also prove useful in the counseling of parents and in parent support groups. It is meaningful to know not only what the "facts" are regarding a parent's child-rearing behaviors, but also the rationale for these "facts". A mother may have trouble with the child and continue to ask about a better way to educate the child, when in actuality these issues do not come from the child, but from the conflict the parent has with the grandparent about their different child-rearing attitudes. In Taiwan, the traditional family is

more collectivistic and the dynamic inside the family is very complicated. Although the dimensions in this study may not explain everything we need to know, understanding their attitudes and the precursor to these attitudes, as well as their child-rearing behaviors, will provide increased insights and broader information concerning the parents, the family, and the children. This could enable professionals to assist parents and their children more successfully.

RESEARCH QUESTIONS

Several research questions were formulated to explore mothers' attitudes, behavioral intentions, and child-rearing behaviors.

Research Question 1: Will mothers' degree of collectivism affect their subjective norms?

Research Question 2: Will mothers' general beliefs affect their specific child-rearing attitudes?

Research Question 3: Will mothers' concepts of development affect their specific child-rearing attitudes?

Research Question 4: Will mothers' sense of competence affect their perceived child-rearing behavioral control?

Research Question 5: Will mothers' subjective norms affect their behavioral intentions?

Research Question 6: Will mothers' child-rearing attitudes affect their behavioral intentions?

Research Question 7: Will mothers' perceived behavioral control affect their behavioral intentions?

Research Question 8: Will mothers' child-rearing behavioral intentions affect their child-rearing behaviors?

CONCEPTUAL AND OPERATIONAL DEFINITIONS

Mothers' Child-Rearing Attitudes Regarding Achievement Expectations

Conceptual Definition: A mother's favorable or unfavorable evaluation of specific child-rearing behaviors regarding achievement expectations.

Operational Definition: Mothers' score for evaluating each of the items from the Scale of Achievement Expectations.

Mothers' Subjective Norms Regarding Achievement Expectations

Conceptual Definition: Mothers' perceived social pressure to perform or not to perform certain child-rearing behaviors.

Operational Definition: Mothers' evaluation scores of other people's attitudes toward each of the items on the Scale of Achievement Expectations.

Mothers' Perceived Behavioral Control Regarding Achievement Expectations

Conceptual Definition: Mothers' perceptions as to how much control they have in performing the child-rearing behaviors.

Operational Definition: Mothers' response scores as to how much control they have regarding whether to perform certain child-rearing tasks (as stated in the scale) or not.

Mothers' General Beliefs Regarding Parenting

Conceptual Definition: A mother's general beliefs about family life and what her role should be as a parent.

Operational Definition: Mothers' scores on the short form of the Parent Attitude Research Instrument (PARI). The original PARI was developed by Schaefer and Bell (1958), and the short form was developed by Cross and Kawash (1968). The short form used in this study is the remodified short form by Sims and Paolucci (Sims, 1971; Sims and Paolucci, 1975).

Mothers' Degree of Collectivism

Conceptual Definition: How collectivistic mothers are influenced by their culture.

Operational Definition: Mothers' scores on the subscale of Collectivism from the instrument INDCOL 95 (Triandis, 1995).

Mothers' Sense of Parenting Competence

Conceptual Definition: Mothers' feelings of how competent they are in rearing their children

Operational Definition: Mothers' scores on the Parenting Sense of Competence Scale (PSOC) by Gibaud-Wallston and Wandersman (1978).

Mothers' Child-Rearing Behavioral Intentions

Conceptual Definition: Mothers' evaluations of how likely it would be for them to perform certain child-rearing behaviors

Operational Definition: Mothers' responses to questions regarding their intentions of performing certain child-rearing behaviors (from the Scale of Achievement Expectations).

Mothers' Child-Rearing Behaviors Regarding Achievement Expectations

Conceptual Definition: Mothers' actual performances of child-rearing behaviors related to achievement expectations.

Operational Definition: Mothers' responses to questions of how often they performed certain child-rearing behaviors regarding achievement expectations over a specific period of time.

Mothers' Concepts of Development

Conceptual Definition: Mothers' perceptions about when children should be able to complete certain developmental tasks.

Operational Definition: Mothers' scores on the adapted Developmental Expectations Questionnaire (Hess et al., 1980).

CONCEPTUAL FRAMEWORK

The conceptual framework of this study came from two sources, Ajzen's (1985) theory of planned behavior and Bronfenbrenner's (1979) ecological theory of human development. The theory of planned behavior can be divided into three parts. The first part is composed of three subdimensions: attitudes, subjective norms, and perceived behavioral control. The second part is the person's behavioral intentions. The third part is the person's behaviors. In this study, the elements adapted from the theory will be: mothers' specific child-rearing attitudes, subjective norms, perceived child-rearing behavioral control; mothers' behavioral intentions; and mothers' child-rearing behaviors regarding achievement expectations. More factors are included in this study and an extended model utilizing the theory of planned behavior is formed. The fourth set of variables, including

mothers' degree of collectivism, their general beliefs about parenting, and their sense of parenting competence are added to this model. This extended model will help explain why mothers hold certain attitudes, intentions, and behaviors.

According to Triandis (1994), cultures can be divided into more individual oriented or more collectivistic oriented categories. Culture will have influences on the people living in it and affect the way people are socialized, thus affecting their personality. Triandis stated that people's degree of collectivism or individualism (their position on the continuum of individualism/collectivism) will be related to how much they attend to social norms, or other people's thoughts. People with a higher degree of collectivism would put more emphasis on subjective norms and be strongly influenced by them. In this model, mothers' degree of collectivism is the antecedent variable of subjective norms.

Mothers' general belief about parenting is a broader and more stable variable that will affect their specific child-rearing attitudes. This variable is the antecedent variable of mothers' child-rearing attitudes regarding scholastic achievement in this model. Mothers' sense of parenting competence will affect their perceptions of how much control they have in parenting practice, thus it is included as the antecedent variable of mothers' perceived behavioral controls.

According to Bronfenbrenner's ecological model (1979), the properties of the person and of the environment, as well as the structure of environmental settings and the processes

taking place within and between them, must be viewed as interdependent and analyzed in systems terms. Mothers do not develop their child-rearing attitudes, general beliefs, etc. in a vacuum. Appropriate contextual variables, therefore, need to be included in the study.

In the present study, the whole set of the extended planned behavior model is embedded in Bronfenbrenner's human ecological framework (1979). This integrated model is presented in Figure 1.2. Additional details of the theory of planned behavior and the ecological theory of human development will be discussed in the review of literature chapter.

ASSUMPTIONS

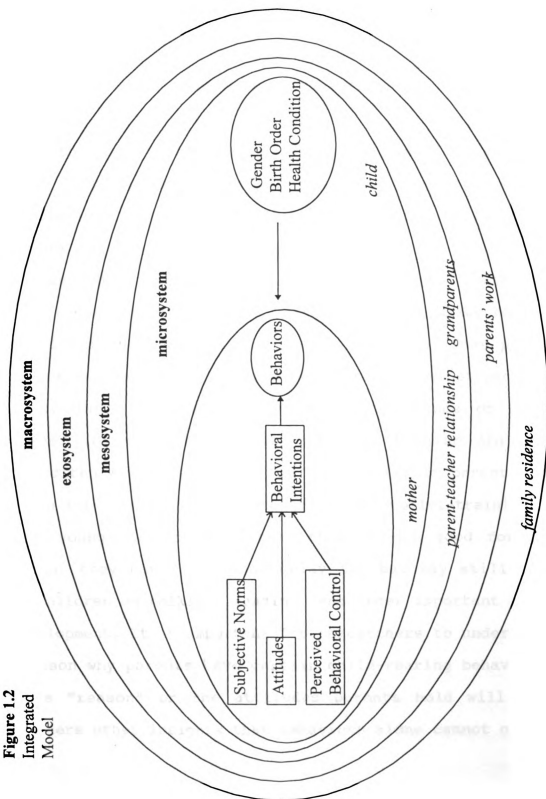
The assumptions for this study are as follows:

1) Mothers' reported perceptions regarding their degree of collectivism, general beliefs, concepts of development, parenting sense of competence, subjective norms, attitudes, perceived behavioral control, behavioral intentions, and their reported behaviors reflect their actual perceptions and their actual behaviors.

2) The mothers from Taipei and the mothers from Kaohsiung included in the study sample are representative of mothers from these areas.

3) The direction of influences is from mothers' general beliefs and attitudes to their child-rearing behaviors and not the other way around.

Figure 1.2
Integrated
Model



CHAPTER II

REVIEW OF LITERATURE

In this study, the theory of planned behavior (attitude theory) is the primary theme of the research questions, and the ecological theory of human development helps build up the framework for the whole research.

Researchers' interest in studying parental attitudes starts from their intention to investigate the linkage between parental attitudes and child behavior outcomes. Some people would ask, why not child-rearing behaviors instead of parental beliefs, isn't it even a more direct influence on child outcomes? In response to this question, Schafer and Bell (1958) cited a good example from Bettelheim: If parents who hurry to force their children to go through toilet-training at a very young age are told that this is not good for the children, they may listen and delay it, but may still push their children on talking, reading, and other important areas of development. It is important for researchers to understand the reason why parents have certain child-rearing behaviors, for the "reason" or the attitudes parents hold will give researchers other insights that behaviors alone cannot offer.

Two theories essential to this study (theory of planned behavior and ecological theory of human development) will be discussed in the following section.

Theory of Planned Behavior

This study explores relations between attitudes and behaviors. The primary theory used is the theory of planned behavior, an extension of the well-known theory of reasoned action by Ajzen and Fishbein (1980). According to the theory of planned behavior, behavior is a direct function of behavioral intention, while the behavioral intention is a function of attitudes, subjective norms, and perceived behavioral control.

The theory of reasoned action (Fishbein and Ajzen, 1975) has been used extensively to study the relationship between attitudes and behaviors, and some efforts have been given to the refinement of the model (Carpenter and Fleishman, 1987; Liska, 1984).

The original theory of reasoned action provides a model of the psychological processes that mediate observed relations between attitudes and behaviors. The authors suggested that the proximal cause of behavior is one's intention to engage in the behavior. Attitudes influence behaviors by their influence on intentions. Campbell (1963) argued that social norms and other situational constraints may create thresholds for expressing attitudes and thereby produce apparent

discrepancies between attitudes and behaviors.

Intention, a psychological construct distinct from attitude, represents the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior. Behaviors requires skills, resources, or opportunities that are not necessarily available. Attitude toward the behavior enters this model as one of the determinants of intention. The other determinant of intention (as Campbell indicated), called subjective norm, consists of a person's belief about whether significant others think that he or she should engage in the behavior.

In the theory of reasoned action, behavior intentions comes from two sources: 1) the attitudes toward the behavior act and 2) the subjective norms. As discussed by Liska (1984), Ajzen and Fishbein's model cannot deal with behaviors that require resources, cooperation, and skills. In response to Liska's and other researchers' criticism about the model (e.g., Bentler and Speckart, 1979), Ajzen (1985) proposed an adjusted model called "theory of planned behavior". This model is particularly applicable for behaviors that are not wholly under volitional control and will be used in this study.

According to Ajzen (1985), the extent to which one's intentions to perform behaviors can be carried out depends in part on the amount of control one has over the behavior. In the theory of planned behavior, control is taken into account as a variable labeled "perceived behavioral control", which is defined as one's perception of how easy or difficult it is to

perform the behavior. Perceived control affects behavior in two ways: it influences intention to perform the behavior, and it may have a direct effect on behavior.

In this study, the theory of planned behavior is used, i.e., the factor of "perceived behavioral control" is included in the model. The questionnaire is constructed to ask directly about the three elements leading to the behavioral intentions (attitudes toward the behavior, subjective norms, and the perceived behavioral control). In this way, antecedents of behavioral intentions as well as the intentions are assessed, and the relationships between these can be evaluated. This model should help researchers understand and explain the relationships among attitudes, intentions, and behaviors more thoroughly.

Ecological Theory of Human Development

In this perspective, development is defined as a lasting change in the way in which a person perceives and deals with his or her environment. The ecological environment is conceived as "a set of nested structures, each inside the next, like a set of Russian dolls" (Bronfenbrenner, 1979). The ecological environment consists of layers of settings that extend far beyond the immediate situation directly affecting the developing person. The environment includes a microsystem, a mesosystem, an exosystem, and the macrosystem.

Each layer of the environment is unique to each system. A microsystem is defined as a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics. A mesosystem comprises the interrelations among two or more settings in which the developing person actively participates. An exosystem refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person. The macrosystem refers to consistencies, in the form and content of lower-order system (micro-, meso-, and exo-), that exist, or could exist, at the level of the subculture or the culture as a whole along with any belief systems or ideology underlying such consistencies.

Bronfenbrenner stated that in ecological research, the properties of the person and of the environment, the structure of environmental settings, and the processes taking place within and between them must be viewed as interdependent and analyzed in systems terms. This is the rationale for the assessment of variables not directly linked to parenting. The environment of the family (rural or urban) may affect every activity that happens inside the family. Whether or not the mother works outside her home may also change the process of interaction in the family.

Parent-child transaction is a part of the family microsystem. All parental and child characteristics are also,

therefore, part of the family microsystem (e.g., parents' age, locus of control; gender of the child, birth order of the child). Parent-teacher relationship (whether parents and teachers have contacts or not, whether parents come to the PTA meeting or not) and the existence of an extended family nearby with frequent contacts are factors representing important mesosystems. The mother's work status is studied as an exosystem reality. From a broader perspective, residential area or context forms part of the the macrosystem.

By using these ecological and theoretical concepts of human development as the basic framework, relevant variables have been included and the interactions among variables are taken into consideration carefully and extensively. A path analysis is applied in this study.

Collectivism

The classification of individualism and collectivism has been popularly utilized in many cross-cultural studies. According to Triandis (1994), the relationship between culture and behavior can be specified in the following framework:

Ecology -> Culture -> Socialization -> Personality -> Behavior

Ecology offers resources people need, and the culture evolves under these specific circumstances. Culture affects the socialization of people, and thus their personality and

their behavior. As stated by Triandis (1994), there are two kinds of cultures, individualistic and collectivistic. Individualism is very important in the United States and generally very important in the English-speaking countries, while collectivism can be found in parts of Europe (e.g., southern Italy, rural Greece) and much of Africa, Asia, and Latin America. Some attributes of people in collectivist and individualistic cultures are defined in Table 2.1 (Triandis, 1994).

It is very important to understand that there could be more than one subculture in a country, and when we try to assess any particular person, he or she will be on a different point of the individualism/collectivism continuum from other people in the same country. Lightfoot and Valsiner (1992) indicated that "social and cultural systems of meaning are not fixed and absolute, but vary according to individual points of view" (p.394). In any one particular culture, people's perceptions are ideologically heterogeneous, and a wide range of variation on personal beliefs is possible. That explains why the scale of degree of collectivism should be used within one culture, across different persons. The assessment of this scale will provide information on how a particular person is socialized in the culture or socialized differently within a particular culture. This can be seen as a personality variable deriving from the culture, according to Triandis's model, that will affect how much a person thinks other people's attitude will matter to him/her.

Table 2.1**Characteristics of Collectivists and Individualists**

Collectivists	Individualists
Relationships are the figure; the individual is the background.	The individual is the figure; relationships are in the background.
Behavior explained as reflecting norms.	Behavior explained by reference to personality, traits, principles, attitudes.
Success is attributed to help from others.	Success is attributed to ability.
Know more about others than about self.	Know more about self than about others.
Favor beliefs that reflect interdependence.	Favor beliefs that reflect independence, emotional detachment from in-groups.
Put high value on security, obedience, duty, in-group harmony, personalized relationships.	Put high value on pleasure, achievement, competition freedom, autonomy, fair exchange.
Proper action is defined by in-group, even if inconsistent with own attitudes.	Attitudes and behavior are supposed to be consistent.
In-group norms more important than attitudes.	Attitudes more important than norms.
In-group goals have primacy or overlap with personal goals.	Personal goals have primacy over in-group goals.

For example, referring again to Table 2.1, one characteristic of collectivists is that they believe proper behavior to be defined by the group, even if inconsistent with their own attitudes.

In this study, if a mother has a high degree of collectivism, her child-rearing behavior will be interpreted to be affected more by the opinions of other significant people (e.g., husband, mother-in-law, etc.) than will that of the mother who has a lower degree of collectivism.

There will be a wider range of variations, particularly for people in a rapidly developing country, as they are subjected to various, and sometimes conflicting, socializing forces. Mothers' degree of collectivism will affect how they think about subjective norms, thus affecting their behavioral intentions regarding certain child-rearing behaviors. As stated by Goodnow and Collins (1990), parenting behavior is not only determined by parents' attitudes of "favorable or not," it is also influenced by the "public" perspective coming from the parents' social network. They indicated that parents' ideas and actions involve monitoring of other people. This "public opinion," therefore, also needs to be taken into consideration when research on parents' attitudes is being conducted.

A country like Taiwan has its own culture, which is deeply influenced by the Confucius ideology. As Taiwan proceeds toward modernization, it has also been under the influence of Japan and the United States, absorbing

information and life styles from these two countries. This has resulted in a process of rapid transformation during recent years. The rapid transformation, in turn, makes it very easy to find people who hold very different attitudes and have very different life styles from others. It is expected that by utilizing the collectivism concept, we will be able to better determine from where different child-rearing attitudes come. It is possible that parents with higher education may hold more westernized (American) attitudes toward child rearing, thus bringing conflict to the relationships between parents and grandparents or other extended family members. It will be interesting to explore how these more "modernized" parents manage to resolve the disagreement or "dissonance" with the previous generation and come up with "their way" of child rearing. More specifically, this study will investigate how the degree of collectivism affects mothers' subjective norms, their behavioral intentions, and subsequently their child-rearing behaviors.

Concept of Child Development

Parents' ideas about child development generally include some basic beliefs pursuant to developmental norms, or when a child should be able to acquire different skills. According to Okagaki and Sternberg (1991), parents' expectations will influence the timing of skill acquired by their children. Stevenson and his colleagues also proposed that parents'

beliefs play a role in performance differences among school children (Stevenson and Lee, 1990; Stevenson et al., 1986).

It is likely that parents' ideas about child development will affect parents' attitudes or expectations about when their children should learn and be able to master certain skills or behaviors. These attitudes, thus, may have impacts on parents' certain child-rearing behaviors. A mother who thinks that a five-year-old child should be able to stop misbehaving when told may hold a more favorable attitude toward this kind of child training/discipline and may be more likely to train her child in this area when he/she is five year old or younger. Therefore, concept of child development is an important factor that may affect mothers' child-rearing attitudes.

Sense of Parenting Competence

Parents' self-esteem or sense of competence is an important part of parental cognition. Parenting self-esteem includes both perceived self-efficacy as a parent and the satisfaction gained from parenting. Utilizing data from the National Longitudinal Survey of Youth (NLSY), Luster and Dubow (1990) found a positive correlation between general maternal self-esteem and the quality of care adolescent mothers provide for their school-age children. In the area of child rearing, the relationship between parents' self-esteem and their child-rearing behaviors requires further studies. Bandura (1982)

defined self-efficacy as expectations for successful coping in upcoming situations. From the perspective of parenting, this refers to how competent and confident parents feel in handling child rearing problems. Bugental and Shennum (1984) indicated that sense of parenting efficacy functions as a moderator of parent-child relationships and that caregivers with low levels of perceived control over child behavior cope less effectively with difficult child behavior. Low levels of perceived self-efficacy may also lead to low levels of satisfaction as a parent. Rodrigue, Geffken, Clark, Hunt, and Fishel (1994) found that parenting self-esteem was inversely correlated with parents' reports of child behavior problems for parents of healthy children. Cutrona and Troutman (1986) indicated that mother's feeling of efficacy mediated the effects of infant temperament and social support on postpartum depression. It is important that the construct of parents' self-esteem be defined with caution so that a clear relationship between this construct and parenting behaviors can be explained. In this study, mothers' sense of parenting competence is assessed since it is influential to mothers' perceived behavioral control, and thus will affect their behavioral intentions indirectly. A mother's sense of parenting competence is assessed by two dimensions, one is the mother's parenting satisfaction and the other is her sense of parenting efficacy.

CHAPTER III

METHODOLOGY

Design of the Study

A survey design was used in this study. The focal problems studied are the linkages between maternal beliefs and mothers' child-rearing attitudes, and the concomitant linkages between child-rearing attitudes and child-rearing behaviors. It is hypothesized that parental beliefs will affect parents' child-rearing attitudes and behavior intentions, thus affecting their child-rearing behaviors. The data were collected from mothers who have their children enrolled in kindergartens (senior class, age four to six) in Taiwan.

The unit of analysis for this study is the individual mother who has her child enrolled in kindergarten. The mother's general beliefs, child-rearing attitudes, child-rearing behaviors, along with other demographic variables will be assessed, and the relationships between these variables will be examined.

Mothers were given the questionnaires by the children's teachers, and they were able to fill it out at home when they had time. There are two benefits from this two-step method. First, in a group administration setting, mothers may feel insecure about people knowing what their attitudes are and try

to fill the questionnaire out in a way that is more acceptable by "society." Without the distraction that may exist in a group administration setting, we may be able to get a more valid picture of the mothers' attitudes. Second, because this is a questionnaire distributed by the teacher of the kindergarten their children attend, we expected mothers would be more willing to participate and the response rate to be higher than could be achieved with a "direct mail" method.

In order to achieve a more comprehensive understanding about the relationships among variables in the study and to guard against one effect being masked by another, a path analysis was conducted.

Hypotheses

The following hypotheses were formed to test the research questions of the study.

Research Question 1: Will mothers' degree of collectivism affect their subjective norms?

H01: Mothers' degree of collectivism will not affect their subjective norms regarding achievement expectations.

H1: Mothers' degree of collectivism will positively affect their subjective norms regarding achievement expectations.

Research Question 2: Will mothers' general beliefs affect their specific child-rearing attitudes?

H02: Mothers' general beliefs will not affect their child-rearing attitudes regarding achievement expectations.

H2: Mothers' general beliefs will affect their child-rearing attitudes regarding achievement expectations.

Research Question 3: Will mothers' concepts of development affect their specific child-rearing attitudes?

H03: Mothers' concepts of development will not affect their child-rearing attitudes regarding achievement expectations.

H3: Mothers' concepts of development will affect their child-rearing attitudes regarding achievement expectations.

Research Question 4: Will mothers' sense of competence affect their perceived child-rearing behavioral control?

H04: Mothers' sense of competence will have no influence on their perceived child-rearing behavioral control regarding achievement expectations.

H4: Mothers' sense of competence will have positive influence on their perceived child-rearing behavioral control regarding achievement expectations.

Research Question 5: Will mothers' subjective norms affect their behavioral intentions?

H05: Mothers' subjective norms will not affect their behavioral intentions toward achievement expectations.

H5: Mothers' subjective norms will positively affect their behavioral intentions toward achievement expectations.

Research Question 6: Will mothers' child-rearing attitudes affect their behavioral intentions?

H06: Mothers' child-rearing attitudes will not influence their behavioral intentions toward achievement expectations.

H6: Mothers' child-rearing attitudes will positively influence their behavioral intentions toward achievement expectations.

Research Question 7: Will mothers' perceived behavioral control affect their behavioral intentions?

H07: Mothers' perceived behavioral control will not affect their behavioral intentions toward achievement expectations.

H7: Mothers' perceived behavioral control will positively affect their behavioral intentions toward achievement expectations.

Research Question 8: Will mothers' child-rearing behavioral intentions affect their child-rearing behaviors?

H08: Mothers' behavioral intentions regarding achievement expectations will not affect their child-rearing behaviors.

H8: Mothers' behavioral intentions regarding achievement expectations will positively affect their child-rearing behaviors.

Sample Selection and Description

The sample for this study was obtained from two separate locations, one from Northern Taiwan and the other from Southern Taiwan. Kindergartens in Taipei represent the sub-sample from Northern Taiwan, while those in Kaohsiung represent the sub-sample from Southern Taiwan. During the first stage, kindergartens from the two different locations were randomly selected independently. Initial contacts were made by phone. Questionnaires were then sent out to those kindergartens that had accepted the invitation to participate in the study. During the second stage, children enrolled in the senior-level classes (children between four- and six-years-old) in those kindergartens who had agreed to participate received the questionnaires from their teachers. The children were instructed to take the questionnaires home for their mothers to fill out. These mothers are the subjects of this study. Four kindergartens were contacted in Kaohsiung and all of them chose to participate in the study. Nine

kindergartens in Taipei were contacted and six of them participated in the study. The response rate for Kaohsing is 30%, while the response rate for Taipei is 20%. The final sample consisted of 356 mothers, with 180 of them from Kaohsiung (Southern Taiwan) and 176 of them from Taipei (Northern Taiwan).

Research Instruments

Mothers' Degree of Collectivism

The instrument used to measure mothers' degree of collectivism is a subscale of Triandis's INDCOL scale (1995). Eight items were taken from this scale and three more items related to family were added to form an 11-item scale. These items are judged to assess the collectivistic orientation of the subject. The response scale for each item ranges from 1 to 7 (from strongly disagree to strongly agree), with higher scores indicating more collectivistic oriented.

Mothers' General Belief Regarding Parenting

The instrument used to measure mothers' general beliefs regarding family life and child-rearing is the Parental Attitude Research Instrument (PARI) by Schaefer and Bell (1958). The original form of this scale involves 115 Likert-type items and utilizes a 4-point response format ranging from *strongly agree* to *strongly disagree*. There are 23 subscales, each evaluated by five items (Schaefer and Bell, 1958;

Touliatos, Perlmutter, and Straus, 1990). This instrument was created a few decades ago and has been used extensively by researchers to measure parental attitudes. Some have used it to examine the relationship between parental attitudes and child outcomes, including levels of children's academic achievement (Banner, 1979), children's creativity (Chu, 1972), children's abilities and field independence (Claeys and DeBoeck, 1976), moral development of children (Lydiat, 1974), personality development of the child (Schaefer and Bell, 1958), and children's perception of internal- vs. external expectancy (Tolor and Jalowiec, 1968). Others have applied the scale to specific groups of parents to investigate whether the factor structure remains the same, or to compare attitude differences among different groups of parents (Chiu, 1987; Cross and Kawash, 1968; deMan, Balkou, and Vobecky, 1985; Humphries and Bauman, 1980; Kriger and Kroes, 1972; Nichols, 1962; Sims and Paolucci, 1975; Yater, Olivier, and Barclay, 1968; Zuckerman, Ribback, Monashkin, and Norton, 1958).

Schaefer and Bell (1958) carefully selected items designed to measure the holistic concept, and a conceptual analysis of the domain of parental attitudes was carried out as a basis for developing the measure. The primary items were tried out and then eliminated or revised according to the responses. Some researchers have used the PARI in their studies and also tried to explore the relationship between the PARI and other measurements. Their efforts have helped establish the validity of this instrument. Banner found that

the PARI successfully discriminated between mothers of under-achievers, average-achievers, and over-achievers (1979); Chu was able to use the PARI to predict young children's creativity (1973); and the correlation between PARI and the moral development of children was partially supported in Lydiat's study (1974). A study by Tolor and Jalowiec showed that some factors of the PARI were significantly related to children's external expectancies (1968). Results of these studies have shown that the PARI has validity in predicting relevant criteria.

Some researchers have used the PARI to collect data from different groups of parents and have conducted factor analyses based on these data. Most have found similar factors as those originally formed by Schaefer and Bell (1958). A short form of the PARI, as well as a reverse scale to control acquiescence response set, are also available (Cross and Kawash, 1968; Zuckerman, 1959; Zuckerman, Ribback, Monashkin, and Norton, 1958). The short form by Cross and Kawash has only one stable construct, authoritarianism. A study done by Sims and Paolucci (1975) has applied the multiple groups cluster analysis procedure and was able to obtain different clusters (e.g., "Children should only trust parents", "Children are demanding", "Frequent dissatisfaction") by using the short form. A confirmatory factor analysis will be conducted to re-examine the constructs of the scale with Taiwanese mothers since the PARI short form used in this study is the modified form by Sims and Paolucci. The constructs may differ, however,

for mothers from different cultures.

As reported by Schaefer and Bell (1958), the reliabilities for the subscales range from .34 to .86, and most of them are above .60. The authors stated that overall the internal consistency reliability coefficients were satisfactory and the test-retest reliabilities were generally good. The study by Sims and Paolucci (1975) came up with ten clusters and the reliability coefficients (Cronbach's Alpha) ranged from .47 to .79.

Parenting Competence

In this study, parenting competence is measured by the Parenting Sense of Competence Scale (PSOC) originally developed by Gibaud-Wallston and Wandersman (1978). From a factor analysis, Johnston and Mash (1989) were able to identify four factors, of which the first two accounted for more than 10% of the variance and had more than three items loading above .40. These two factors were meaningful and were similar to the subscales of "Satisfaction" and "Efficacy" derived by Gibaud-Wallston and Wandersman. The PSOC is a 17-item scale. Each item uses a 6-point likert-scale ranging from *strongly disagree* (6) to *strongly agree* (1). Scoring for Items 1, 6, 7, 10, 11, 13, 15, and 17 is reversed so that higher scores indicate mothers having greater sense of competence. The reported alpha were .82 and .70 for the Satisfaction and Efficacy scales, respectively. An internal reliability estimate for the Efficacy scale using the PSOC in a sample of

mothers of infants reported by Cutrona and Troutman (1986) was .72.

Scale of Achievement Expectations

The following five variables (attitude, intention, subjective norm, perceived behavioral control, and the actual behavior) are measured using the scale of achievement expectations. This scale was developed by the author for this study. The items in the scale are related to what mothers will do or will ask their children to do for the benefit of their child's achievement. These items were conceptually developed, drawing upon an interview of mothers developed by Sears, Maccoby, and Levin (1957), the Attributes of Intelligence Scales by Okagaki and Sternberg (1993), the intellectual subscale of Inventory of Parenting Behaviors (Lawton, Coleman, Boger, Pease, Galeja, Poresky, and Looney, 1983), and the Home Observation for Measurement of the Environment by Caldwell and Bradley (1984).

Attitudes and Intentions: Mothers' attitudes and intentions are measured by questions adopted from items on the list of achievement expectations related to the child-rearing practice scale. A sample item is, "Your overall attitude toward sending your child to an English class is ____." The seven-point scale ranges from unfavorable to favorable. A sample item for intention is, "You will try to send your child to an English class." Mothers rate the statement on the seven-

point scale ranging from "extremely low intention" to "extremely high intention". Higher scores indicate that mothers have more favorable attitudes or intentions toward that statement.

Subjective Norms: An example of these questions is, "Most people who are important to me would probably consider my sending my child to the English class to be ____". Mothers circle their choice on the seven-point scale ranging from extremely bad to extremely good. Higher scores indicate mothers rate their subjective norms as more favorable toward the statement.

Perceived Behavioral Control: Mothers' perceived behavioral control is measured by items related to the list of achievement expectations in the child-rearing scale. A sample of a perceived behavioral control item is, "How much control do you have over whether you do or do not send your child to an English class?" The seven point scale ranges from very little control to complete control. This set of questions measures mothers' perceptions of how much decision power they have over specific child-rearing behaviors. Higher scores indicate mothers perceive that they have more control over the child-rearing behavior described in the statement.

Behaviors: Mothers' behaviors are measured by a set of questions asking whether they performed certain achievement-expectation related child-rearing behaviors or not during a period of time, or the frequency with which they have performed certain behaviors. A sample item is, "Did you enroll your child in any English class?" or "How often did you read to your child during the past week?" Higher scores indicate that mothers have performed more child-rearing behaviors described in the statement.

Concept of Development

In this study, mothers' concept of development is measured by an adapted form of the Developmental Expectations Questionnaire. This instrument was originally designed jointly by Japanese and U.S. research teams (Hess, Kashiwagi, Azuma, Price, and Dickson, 1980) and was administered to mothers when their children were five years of age. Mothers were asked to indicate their expectations of when the behavior would be mastered by their children (before age four, between ages four and six, or after age six). Items of the original instrument were constructed to represent seven categories of behavior that a child in either country would normally be expected to master during the first eight years of life. These three age-ranges are assigned a score of 3, 2, or 1 such that higher numbers indicate that mastery was expected at an earlier age. For this study, the five most relevant categories are used with two dropped (emotional maturity and verbal

assertiveness), making a total of 30 items. The five categories included are: compliance, independence, school-related skills, and social skills. The items used in the category of school-related skills come from two sources; three are from the original scale by Hess et al. (1980), while the other eight items are added from the study done by Goodnow et al. (1984). In this study, mothers who expect their children to master the school-related skills at an earlier age may hold more favorable attitudes toward the items in the scale of achievement expectation.

Other Variables

Demographic variables, both mother's and children's individual characteristics, as well as family contextual variables, were assessed. These include residence area (urban or rural), mothers' working status, education level, family type (nuclear family or not), family SES, children's gender, birth order, and health condition (any chronic illness). Relationships among variables in the model not specified in the hypotheses will also be examined in the data analysis to provide further understanding of the results.

Data Analysis

The data analyses in this study include two phases. First, descriptive statistics are presented to show the sample's characteristics, including living environment, as

well as mother and child characteristics. In the second phase of the data analyses, inferential statistics, including factor analyses and path analyses, are presented.

Factor analysis is a method for determining the number and nature of the underlying variables or constructs among large numbers of measures (Kerlinger, 1973). Factor analysis is an important technique in exploring constructs. When completing such an exploratory factor analysis, however, the researcher has little control over the analysis. Unlike the exploratory factor analysis, a confirmatory factor analysis gives the researcher complete control over the specification of indicators for each construct (Hair, Anderson, Tatham, and Black, 1992).

In this study, confirmatory factor analysis will be utilized to examine the constructs for the path model. Conducting a confirmatory factor analysis helps determine the appropriateness of the factor structure in the model. It improves the ability to determine whether the variables really represent the latent constructs specified in the researcher's path model. Internal consistency within each construct and parallelism between items and other constructs can be assessed through a confirmatory factor analysis. Once this important process is completed, an appropriate path analysis can be conducted to determine relationships among different constructs.

In this study, confirmatory factor analyses were performed using the CFA program developed by Hamilton and Hunter (1992). This methodology enables the researcher to overcome the blind-rules of extracting large factors without emphasizing a theoretical base. The operational procedure necessitates the initial inspection of an inter-item correlation matrix, followed by the grouping of various constructs of similar items based on previous findings or a theoretical base. During the process of grouping, three techniques were used to form and evaluate these factors, including internal analysis, external analysis, and content analysis. Internal analysis mainly deals with internal consistency of the items or how well they relate to one another in a factor. A second way to evaluate the similarity of items in a group is to analyze the patterns of correlations with items outside the group, or to examine the external parallelism. If items in a particular group should "stick together" in the sense that they are parallel items, they should show a quite similar pattern of correlations with items outside the group. This task is performed by the test of parallelism in the CFA program. The third way used to evaluate different item combinations is to examine the content of the items. This is the more subjective aspect of the analysis. These three approaches are used to evaluate the factors and establish the validity of different constructs.

Path analyses were performed to test the operational model. Path analysis is a causal model for understanding

relationships between variables. The estimates of the path coefficient (standardized beta weights) in the path model indicate the strengths of the relationships between pairs of variables with the effects of all other variables held constant. In this study, path analysis were performed using the PATH program developed by Hunter and Hamilton (1992).

Assessment and Analytical Significance of the Study

Researchers have tried to add dimensions to increase the relationship between attitude and behavior. By utilizing the theory of planned behavior, this study will investigate different elements leading to a person's behavior. It is hypothesized that this will better explain mothers' child-rearing behaviors. The PARI instrument has been used to measure general parental beliefs. This instrument has been popular in the U.S., Canada, and some European countries (France, Italy, etc.). It has not been used extensively by the researchers in Taiwan. Researchers in the U.S. and Canada have come up with basically similar factors using exploratory factor analysis. It will be a very meaningful research step to try to use it in Taiwan.

Two tasks needed to be accomplished. First, an exploratory factor analysis was implemented as a reference to determine if the constructs for mothers in Taiwan are similar to mothers in the U.S., Canada, and Italy. Second, a confirmatory factor analysis was implemented to determine if

the factor structure is meaningful. For example, various studies using PARI have found different factor combinations. The PARI-Short form was created by Cross and Kawash (1968). They established two factors, i.e., authoritarianism and warmth. Another study by Sims and Paolucci (1975) found ten different clusters. The process of CFA will help determine which factor structure is more applicable to these analyses. By using the PARI instrument in Taiwan, this study will contribute to further understanding of PARI, providing researchers who plan to use PARI outside of North America or western Europe with different perspectives. If more and more studies in different countries can be done, researchers may be able to establish universal constructs for the PARI.

CHAPTER IV

RESULTS

The main objective of this study was to develop a holistic model that would help researchers understand not only the linkage between mothers' child-rearing attitudes and their child-rearing behaviors, but also the relationships between these two variables and their antecedent and mediating variables.

Basic Characteristics of the Sample

Characteristics of the sample are presented under three categories: parent characteristics, child characteristics, and family characteristics.

Parent Characteristics

Parent characteristics, including both parents' ages, education, mothers' working status, and number of children, are presented in Table 4.1 to Table 4.4. The mean age of mothers was 34.86 years. The mean age of fathers was 37.96 years. The mean years of education for mothers was 13 years. The mean years of education for fathers was 14 years.

Characteristics of the Children

Child characteristics, including child age, gender, birth order, and health condition are presented in Table 4.5. The mean age of children was 5 years. Of the 353 children, 173 were boys and 180 of them were girls.

Family Characteristics

Family characteristics are presented in Table 4.6.

Table 4.1 Mother's and Father's Age

	Mother	Father
	-----	-----
22-26	4	0
27-29	19	4
30-32	70	26
33-35	98	78
36-38	93	98
39-41	29	66
42-45	21	56
46-47	0	9
>47	0	8

Mean	34.86	37.96
Median	35	38
SD	3.98	4.39

Table 4.2 Education of Parents (as number of school years completed)

	Mother	Father
	-----	-----
≤ 9 years	7.0 %	7.4 %
9-12 years	38.8 %	21.9 %
12-14 years	31.5 %	29.2 %
>14 years	22.7 %	41.5 %
	-----	-----
Mean Years	13	14

Table 4.3 Mothers' Working Status

Employed	169
Not Employed	175

Table 4.4 Number of Children

One	53
Two	211
Three/Four	87

Mean	2.13
SD	.69

Table 4.5 Characteristics of the Children

<u>Age</u>		
6 years old	80	
5 years old	206	
4 years old	69	
<u>Gender</u>		
Boy	173	
Girl	180	
<u>Birth Order</u>		
First	170	
Second	143	
Third	34	
Fourth	7	
<u>Health Condition</u>		
Illness		
Yes	37	
No	319	
Emergency		
Yes	135	
No	218	

Table 4.6
Family Characteristics

Residence Area		
	Taipei	176
	Kaohsiung	180
Family Type		
	Nuclear family	214
	Extended family	136
	Grandparents	118
	Uncles or Aunts	72
	Other relatives	4

Confirmatory Factor Analysis (CFA)

Several confirmatory factor analyses were performed. The purpose of the confirmatory factor analysis was to assess and validate the measurement model, and to generate a disattenuated correlation matrix of the explanatory factors and mothers' child-rearing behaviors that would be used in path analysis. The CFA was performed on the sample of 356 subjects, with communalities placed on the diagonal of the correlation matrix; therefore, the correlation estimates among factors and mothers' behaviors have been corrected for attenuation (Hunter and Gerbing, 1982). The estimates of the item-factor correlations and the reliability for the explanatory factors and mothers' behaviors are presented in tabular form.

Degree of Collectivism

Two factors were formed from the collectivism scales. Factor one ("family first") is composed of three items which imply that mothers emphasize the importance of family, and they are willing to sacrifice their own needs in order to take care of the family. Factor two ("group oriented") is composed of three items which deal with a more general aspect of collectivism. These items imply that mothers feel that the interest of their group is more important than their self-interest, thus they are willing to respect group decisions without trying to fight for their own interest. The

correlation between "family first" and "general group orientation" is .49. The measurement model is presented in Table 4.7.

Table 4.7

**Measurement Model and Confirmatory Factor Analysis
for Collectivism**

	Alpha	Item-factor Correlation
Family First	.73	
Item 1. Family stay together		.75
Item 2. My duty is to take care of my family		.76
Item 3. Consult family members before making decisions		.58
General Group Orientation	.70	
Item 1. Sacrifice for the benefit of the group		.50
Item 2. Respect decisions by the group		.89
Item 3. Respect the majority's wishes in my group		.62

Mother's General Belief

Items in the Parent Attitude Research Instrument were analyzed using the Confirmatory Factor Analysis program. Items were initially grouped on the basis of the modified scales by Sims and Paolucci (Sims, 1971; Sims and Paolucci, 1975), which originated from the PARI-Short form created by Cross and Kawash (1968).

These initial groupings showed that, for this Taiwanese sample, the original scales were not consistent with expectations. Therefore, it was necessary to develop new scales from these data. Four factors were found, including 1) Trust parent only, 2) Authoritative parenting, 3) Deception, and 4) Feel trapped as a homemaker. The scales and the items of which they are composed are presented in Table 4.8. Correlations among these factors are presented in Table 4.9.

Mothers' Concept of Development

Based on the questionnaires developed by Hess et al. (1980) and Goodnow et al. (1984), four factors were formed, including 1) compliance, 2) independence, 3) school-related skills, and 4) social skills. The scales and the items of which they are composed are presented in Table 4.10. Correlations among these factors are presented in Table 4.11.

**TABLE 4.8 Measurement Model and Confirmatory Factor Analysis
for General Beliefs**

	Alpha	Item-factor Correlation
Trust parent only (Parental authority)	.58	
Item 1. Children should not learn things that make them doubt parents' ideas		.37
Item 2. Never doubt parents' view is good for a child		.61
Item 3. Child should not question parents' thinking		.71
Authoritative	.62	
Item 1. Encourage children to tell parents when family rules are unreasonable		.48
Item 2. Child's ideas should be considered regarding family decisions		.57
Item 3. Treat a child as an equal		.60
Item 4. A child can have and express his own view		.51
Deception	.55	
Item 1. No need to explain when you can get kids doing what you want		.42
Item 2. Trick a child into doing something instead of arguing with him		.75
Item 3. You have to fool children into doing things because they cannot understand		.47

Table 4.8 (cont'd)

Feel trapped as a homemaker	.70	
Item 1. Taking care of a home makes a woman feel she can't get out		.58
Item 2. A young mother feels "held down"		.54
Item 3. Children asking things makes a parent lose temper		.36
Item 4. Young mothers are bothered by the feeling of being shut up in the home		.65
Item 5. Raising children makes you unable to have enough time to do what you like		.53
Item 6. Husbands should know a woman feels "hemmed in" staying home		.52

Table 4.9

Factor Correlations for General Beliefs

	Trust Parent Only	Authori- tative	Decep- tion	Feel Trapped
Trust Parent Only	1.000			
Authori- tative	-.007	1.000		
Decep- tion	.181	.171	1.000	
Feel Trapped	.050	.056	.311	1.000

Table 4.10
Measurement Model and Confirmatory Factor Analysis
for Developmental Expectations

	Alpha	Item-factor Correlation
Compliance	.78	
Item 1. Stops misbehaving when told		.73
Item 2. Does task immediately when told		.86
Item 3. Gives up reading or TV to help mother		.63
Independence	.69	
Item 1. Takes care of own clothes		.57
Item 2. Sits at table and eats without help		.67
Item 3. Does regular household tasks		.73
School-related skills	.82	
Item 1. Knows surname		.55
Item 2. Knows color names		.95
Item 3. Knows shape names		.84
Social skills	.77	
Item 1. Shares his/her toys with other children		.66
Item 2. Sympathetic to feelings of other children		.83
Item 3. Resolves disagreements without fighting		.70

Parenting Sense of Competence

Two factors were formed ("satisfaction" and "efficacy") based on the research by Johnston and Mash (1989). Through the CFA programs, eight items with low internal consistency or lacking parallelism were eliminated. Correlation between these two factors is .249. The scales and the items of which they are composed are presented in Table 4.12.

Table 4.11

Factor Correlations for Developmental Expectations

	Compliance	Indepen- dence	School- Related Skills	Social Skills
Compliance	1.000			
Indepen- dence	.377	1.000		
School- Related Skills	.141	.353	1.000	
Social Skills	.287	.375	.458	1.000

Table 4.12

Measurement Model and Confirmatory Factor Analysis
for Parenting Sense of Competence

	Alpha	Item-factor Correlation
Parenting satisfaction	.67	
Item 1. A fine model for a new mother		.49
Item 2. Meet personal expectations in child-caring		.59
Item 3. Feel familiar with parenting role		.53
Item 4. Have skills necessary to be a good parent		.69
Parenting efficacy	.75	
Item 1. Feeling frustrated		.60
Item 2. Feeling of no accomplishment		.70
Item 3. Feeling of being manipulated		.66
Item 4. Feeling of not getting anything done		.52
Item 5. Feeling tense and anxious as a parent		.61

Achievement Expectations

From the confirmatory factor analysis performed at the third stage, it was shown that mothers' achievement expectation toward their children as measured by the ten items from the achievement expectation questionnaire was not uni-dimensional. Based on the test of internal consistency and the test of parallelism, it was found that the scale is composed of two distinctive categories, with high internal consistency

within each category. These two categories are scholastic orientation achievement and activity orientation achievement. Thus mothers' expectations were divided into two constructs. Questionnaire items representing these two constructs will be presented in the following (Table 4.13 to Table 4.17).

Table 4.13
Measurement Model and Confirmatory Factor Analysis
for Subjective Norms of Achievement Expectations

	Alpha	Item-factor Correlation
Scholastic orientation	.67	
Item 1. Help your child learn numbers, the alphabet, etc.		.65
Item 2. Ask your child to read		.50
Item 3. Encourage your child to do well in the kindergarten		.48
Item 4. Help your child with his/her homework or project		.71
Activity orientation	.79	
Item 1. Buy educational goods		.63
Item 2. Take your child to library, bookstore, etc.		.95
Item 3. Take your child to visit places		.69

Table 4.14
Measurement Model and Confirmatory Factor Analysis
for Attitudes of Achievement Expectations

	Alpha	Item-factor Correlation
Scholastic orientation	.52	
Item 1. Help your child learn numbers, the alphabet, etc.		.49
Item 2. Ask your child to read		.43
Item 3. Help your child with his/her homework or project		.62
Activity orientation	.68	
Item 1. Buy educational goods		.53
Item 2. Take your child to library, bookstore, etc.		.88
Item 3. Take your child to visit places		.56

Table 4.15
Measurement Model and Confirmatory Factor Analysis
for Control of Achievement Expectations

	Alpha	Item-factor Correlation
Scholastic orientation	.83	
Item 1. Help your child learn numbers, the alphabet, etc.		.82
Item 2. Ask your child to read		.72
Item 3. Help your child with his/her homework or project		.80
Activity orientation	.86	
Item 1. Buy educational goods		.72
Item 2. Take your child to library, bookstore, etc.		.95
Item 3. Take your child to visit places		.78

Table 4.16
Measurement Model and Confirmatory Factor Analysis
for Intentions of Achievement Expectations

	Alpha	Item-factor Correlation
Scholastic orientation	.68	
Item 1. Help your child learn numbers, the alphabet, etc.		.72
Item 2. Ask your child to read		.59
Item 3. Help your child with his/her homework or project		.63
Activity orientation	.74	
Item 1. Read to your child		.67
Item 2. Play educational games with your child		.76
Item 3. Buy educational goods		.68

Table 4.17
Measurement Model and Confirmatory Factor Analysis
for Behaviors of Achievement Expectations

	Alpha	Item-factor Correlation
Scholastic orientation	.76	
Item 1. Help your child learn numbers, the alphabet, etc.		.74
Item 2. Ask your child to read		.60
Item 3. Help your child with his/her homework or project		.80
Activity orientation	.66	
Item 1. Play educational games with your child		.71
Item 2. Buy educational goods		.59
Item 3. Take your child to library, bookstore, etc.		.60

Confirmatory factor analyses were performed at three stages. First, a confirmatory factor analysis was conducted on mothers' general belief (PARI). This analysis was seen as necessary because previous research extracted factors that differed from one study to another, and the particular set of factors applicable to people in Taiwan was unknown. At the second stage, two confirmatory factor analyses were performed, one for the scale of general beliefs, scale of mothers' concepts of development, and scale of collectivism, and the other for mothers' attitudes, subjective norms, perceived behavioral control, behavioral intentions, and actual behaviors. A final confirmatory factor analysis was performed with all outcome factors from the second stage. All factor analyses were performed using the Confirmatory Factor Analysis Program (CFA) developed by Hamilton and Hunter (1992). The result of the final confirmatory factor analysis generated the correlation estimates that were used in the path analyses.

Path Analysis

Path analyses were performed to test the holistic model, using the disattenuated correlation matrix as the input. That is, a series of multiple regressions were performed according to the specification of the model in Figure 1.1. In this study, two separate path analyses were conducted for two different constructs of scholastic achievement; i.e., scholastic oriented achievement, and activity oriented achievement. The estimates of the path coefficients (i.e., the

regression beta weights) and the model fit chi-square statistics for these two models are presented in Figure 4.1 for model A-1, and in Figure 4.2 for model B-1 (also shown in Table 4.18 and Table 4.19). For model A-1, scholastic orientation achievement, the chi-square statistic of the overall model, calculated as the sum of squared residuals between the model-reproduced correlations and the corresponding observed correlations, is found to be statistically nonsignificant (Chi-Square = 82.18, $df = 100$, $p > .90$), indicating that the deviation between the model-reproduced correlations and the observed correlations is statistically minimal. For model B-1, activity orientation achievement, the chi-square statistic of the overall model is also found to be statistically nonsignificant (Chi-Square = 119.42, $df = 101$, $p > .10$), indicating that the deviation between the model-reproduced correlations and the observed correlations is statistically minimal.

It is concluded that the operational model fits the sample in both categories, the scholastic orientation achievement and the activity orientation achievement. These two models, therefore, both account for the observed relationships among mothers' general beliefs, concepts of development, sense of parenting competence, attitudes, subjective norms, perceived control, intentions, and actual behaviors.

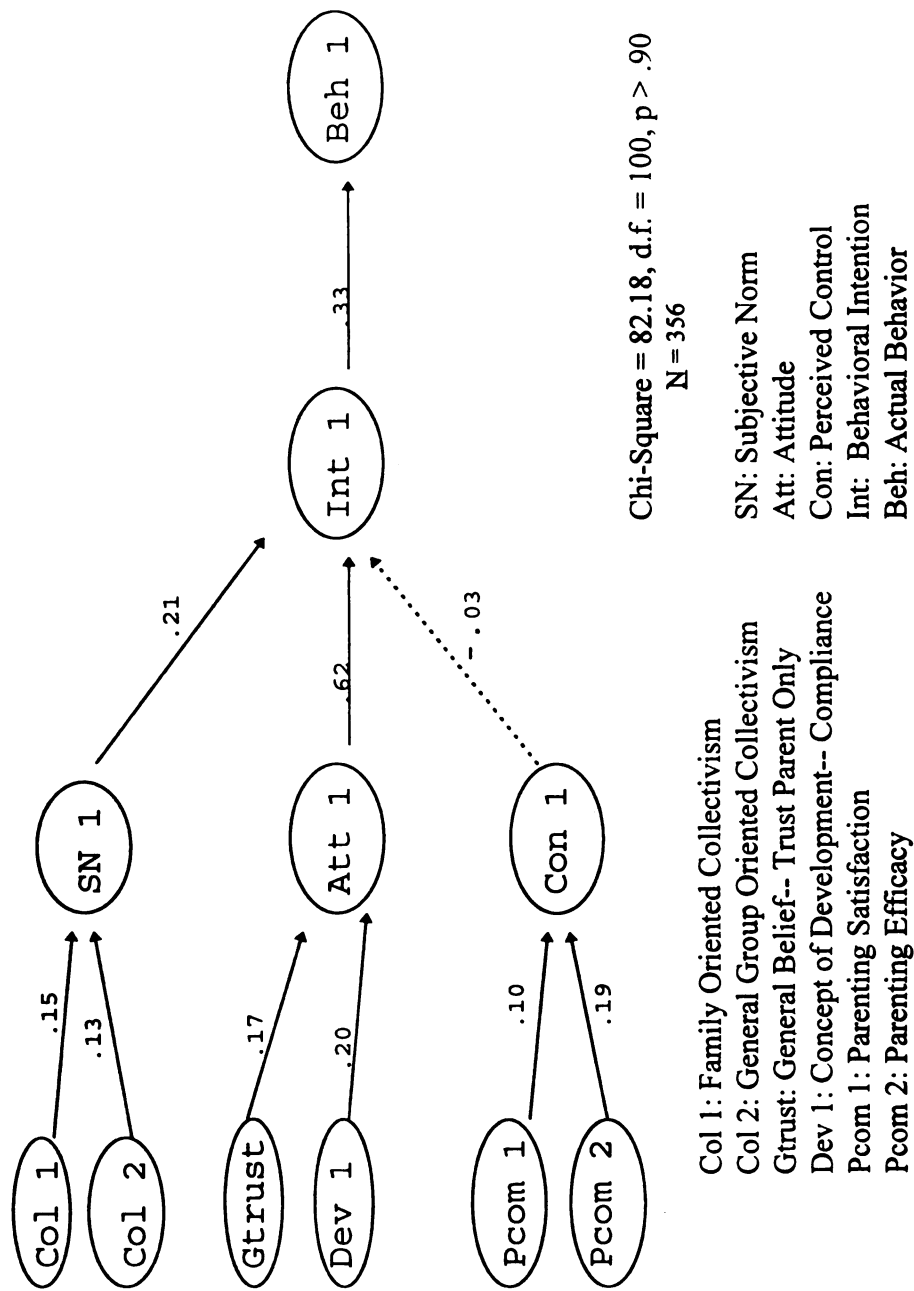
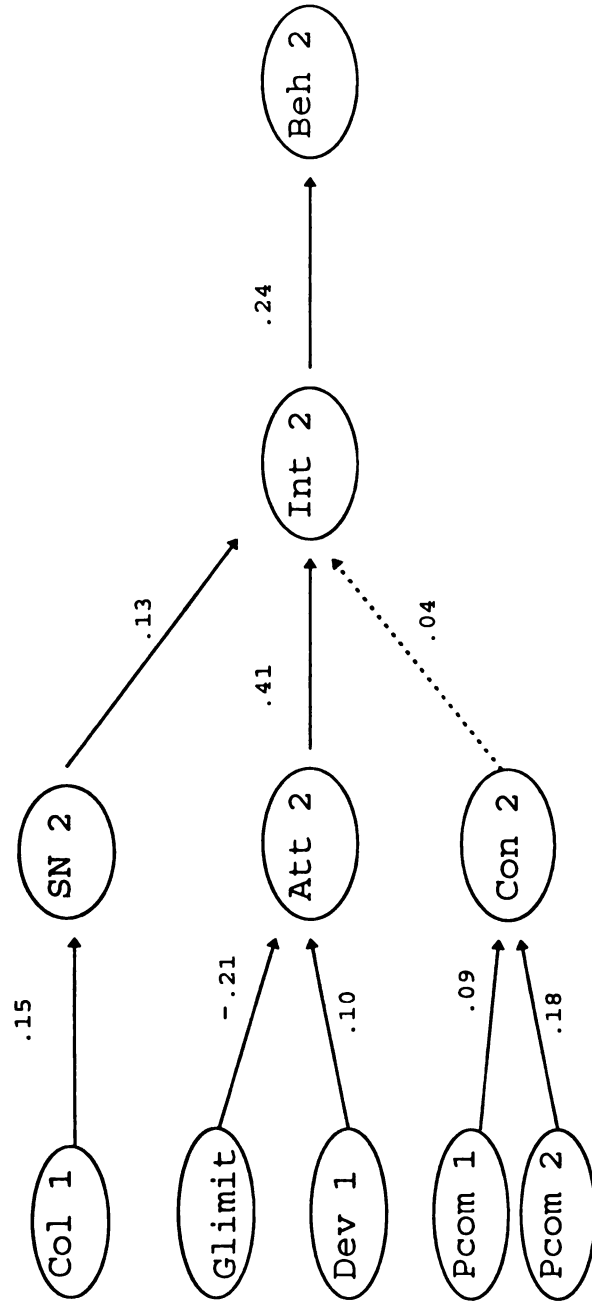


Figure 4.1 Path Model for Scholastic Orientation Expectations (Model A -1)



Chi-Square = 119.42, d.f. = 101, $p > .10$
 N = 356

Col 1: Family Oriented Collectivism	SN: Subjective Norm
Glimit: General Belief-- Feeling Trapped	Att: Attitude
Dev 1: Concept of Development-- Compliance	Con: Perceived Control
Pcom 1: Parenting Satisfaction	Int: Behavioral Intention
Pcom 2: Parenting Efficacy	Beh: Actual Behavior

Figure 4.2 Path Model for Activity Orientation Expectations (Model B-1)

In the scholastic orientation achievement model (A-1), path coefficients show that mothers' intentions strongly and positively affect their actual behaviors; mothers' behavioral intentions are influenced strongly and positively by their attitudes, and moderately and positively by their subjective norms. No significant relationship was found between mothers' perceived control and their behavioral intentions. Various antecedent variables exert indirect influences on mothers' behavioral intentions and actual behaviors through their attitudes, subjective norms, and perceived control. Mothers' degree of collectivism are moderately and positively related to their subjective norms. Mothers' general beliefs regarding children-trusting-parents-only and their concepts of development regarding compliance are moderately and positively related to their attitudes. Mothers' satisfaction regarding parenting is weakly and positively related to their perceived control, while their self efficacy regarding parenting is moderately and positively related to their perceived control.

In model B-1 (activity oriented achievement), path coefficients show that mothers' intentions strongly and positively affect their actual behaviors; mothers' behavioral intentions are influenced strongly and positively by their attitudes, and moderately and positively by their subjective norms. A weak relationship was found between mothers' perceived control and their behavioral intention. Various antecedent variables also exert indirect influences on mothers' behavioral intentions and actual behaviors through

their attitudes, subjective norms, and perceived control in this model. Mothers' degree of collectivism (construct one) is strongly and positively related to their subjective norms. Mothers' general beliefs regarding parents-being-trapped is strongly and negatively related to their attitudes, while their concepts of development regarding compliance are weakly and positively related to their attitudes. Mothers' satisfaction regarding parenting is weakly and positively related to their perceived control; while their self efficacy regarding parenting is moderately and positively related to their perceived control.

HYPOTHESES TESTING

The results for hypotheses testing and the summary for path analysis were presented in Tables 4.18 and 4.19.

Degree of Collectivism and Subjective Norm

H01: Mothers' degree of collectivism will not affect their subjective norms regarding achievement expectations.

The scale of collectivism was found to consist of two constructs, family-oriented collectivism and general-group-oriented collectivism. In the path model for scholastic-oriented expectation, these two factors both exert influences on mothers' subjective norms, with the path coefficient of .15

Table 4.18

Path Analysis Coefficients for Scholastic Orientation
Achievement
(Model A-1)

Path	Hypo-thesis	Expected Sign	Path Coeff.	68% Conf. Interval
Col 1 → SN 1	H1	+	.15	(.06, .25)
Col 2 → SN 1	H1	+	.13	(.03, .22)
Gtrust → Att 1	H2	+	.17	(.07, .27)
Dev 1 → Att 1	H3	+	.20	(.12, .29)
Pcom 1 → Con 1	H4	+	.10	(.02, .17)
Pcom 2 → Con 1	H4	+	.19	(.12, .25)
SN 1 → Int 1	H5	+	.21	(.11, .30)
Att 1 → Int 1	H6	+	.62	(.53, .70)
Con 1 → Int 1	H7	+	-.03	(-.11, .06)
Int 1 → Beh 1	H8	+	.33	(.26, .40)

Chi-Square=82.18 d.f.=100 p>.90

N = 356

Col 1: Family Oriented Collectivism
Col 2: General Group Oriented Collectivism
Gtrust: General Belief-- Trust Parent Only
Dev 1: Concept of Development-- Compliance
Pcom 1: Parenting Satisfaction
Pcom 2: Parenting Efficacy
SN: Subjective Norms
Att: Attitudes
Con: Perceived Behavioral Control
Int: Behavioral Intentions
Beh: Actual Behaviors

Table 4.19

Path Analysis Coefficients for Activity Orientation
Achievement
(Model B-1)

Path	Hypo-thesis	Expected Sign	Path Coeff.	68% Conf. Interval
Col 1 → SN 2	H1	+	.21	(.14, .28)
Glimit → Att 2	H2	-	-.21	(-.14, -.29)
Dev 1 → Att 2	H3	+	.10	(.03, .18)
Pcom 1 → Con 2	H4	+	.09	(.02, .16)
Pcom 2 → Con 2	H4	+	.18	(.11, .24)
SN 2 → Int 2	H5	+	.13	(.05, .21)
Att 2 → Int 2	H6	+	.41	(.34, .49)
Con 2 → Int 2	H7	+	.04	(-.03, .11)
Int 2 → Beh 2	H8	+	.24	(.17, .32)

Chi-Square=119.42 d.f.=101 p>.10

N = 356

Col 1: Family Oriented Collectivism
Glimit: General Belief-- Feeling Trapped
Dev 1: Concept of Development-- Compliance
Pcom 1: Parenting Satisfaction
Pcom 2: Parenting Efficacy
SN: Subjective Norms
Att: Attitudes
Con: Perceived Behavioral Control
Int: Behavioral Intentions
Beh: Actual Behaviors

and .13, respectively. This indicated that mothers who are more collectivistic oriented tend to think significant people have favorable attitudes toward child-rearing behaviors regarding scholastic oriented expectations. In the path model for activity oriented expectation, only family oriented collectivism exerts influences on mothers' subjective norms (path coefficient= .21), indicating that mothers who hold a higher degree of family oriented collectivism tend to think people have favorable attitudes toward child-rearing behaviors regarding activity orientation expectations. Therefore, the null hypothesis for H01 was rejected.

General Belief and Attitude

H02: Mothers' general beliefs will not affect their child-rearing attitudes regarding achievement expectations.

Of the four PARI subscales, the factor of "trust parent only" (GTRUST) has positive effects on mothers' attitudes toward child-rearing behaviors regarding scholastic orientation expectations; while the GLIMIT factor, "feel trapped as a homemaker", has negative effects on mothers' attitudes toward child-rearing behaviors regarding activity oriented expectations. Mothers who feel strongly that children should trust parent only, should not doubt their parents' ideas, and should not learn from outsiders to question their parent's thinking, tend to hold more favorable attitudes (path

coefficient= .17) toward behaviors regarding scholastic orientation expectations (e.g., help children learn numbers and the alphabet); while mothers who feel they are held down, or cannot do what they'd like to do, tend to hold less favorable attitudes toward behaviors regarding activity orientation expectations (path coefficient= -.21). These results indicate that mothers who have stronger feeling about children listening to parents and following parents' instructions without any doubt also put more emphasis on behaviors regarding scholastic orientation expectations. On the other hand, mothers who have more negative feelings toward the "homemaker" role are less likely to be interested in the idea of expecting children to develop individual quality or talent that is not directly linked to scholastic achievement process (e.g., going to a concert or an exhibit). Thus, the null hypothesis for H02 was rejected.

Concepts of Development

H03: Mothers' concepts of development will not affect their child-rearing attitudes regarding achievement expectations.

Of the four factors in this scale, factor one (developmental expectations regarding compliance) is positively related to mothers' attitudes toward behaviors regarding both scholastic expectations and activity expectations with path coefficients of .20 and .10,

respectively. Mothers who expect their children to be able to control their behaviors themselves and to comply with their parents at an earlier age tend to have favorable attitudes toward child-rearing behaviors involving both scholastic expectations and activity expectations. This suggests that mothers' early demand for children's compliance affects how they think about child-rearing behaviors regarding both scholastic expectations and activity expectations. Thus, the null hypothesis for H03 was rejected.

Parenting Sense of Competence and Perceived Behavioral Control

H04: Mothers' sense of competence will have no influence on their perceived child-rearing behavioral control regarding achievement expectations.

The scale of Parenting Sense of Competence is composed of two subscales, parenting satisfaction and parenting efficacy. The satisfaction subscale contains items stating that parenting is not a complex or difficult job, and individuals who score high on these items tend to feel that they are "good-enough" parents, and that other parents should be able to learn from their experiences. The efficacy subscale contains items dealing with a person's feelings of accomplishment and the ability of being in control of doing things, as well as the sense of being a parent without frustration and anxiety. In the model for scholastic

orientation achievement, it was found that both parenting satisfaction and parenting efficacy positively affect mothers' perceived control (path coefficients = .10, .19). In the model for activity oriented achievement, positive effects are also found. The path coefficient for parenting satisfaction is .09, and for parenting efficacy, .18. For both models, parenting efficacy has been a stronger factor than parenting satisfaction in predicting mothers' perceived behavioral control. Mothers who feel they are in control and are less anxious or tense about their parenting role tend to perceive that they have more control in child-rearing behaviors regarding both scholastic expectations and activity orientation expectations. Mothers who have higher satisfaction also tend to have higher perceived behavioral control, though the relationship is not as strong. For both models, the null hypothesis for H04 was rejected.

Subjective Norms and Behavioral Intentions

H05: Mothers' subjective norms will not affect their behavioral intentions toward achievement expectations.

In the path model for scholastic orientation expectations, subjective norms are strongly and positively related to mothers' behavioral intentions (path coefficient=.21). For activity orientation expectations, subjective norms are moderately and positively related to mothers' behavioral intentions (path coefficient= .13). These results indicate

that the relationship between subjective norms and behavioral intentions exists in both models. For both models, the null hypothesis for H05 was rejected.

Attitudes and Behavioral Intentions

H06: Mothers' child-rearing attitudes will not influence their behavioral intentions toward achievement expectations.

For both models, mothers' attitudes have very strong and positive influences on their behavioral intentions. Mothers who have favorable attitudes toward child-rearing behaviors regarding both scholastic orientation and activity orientation expectations tend to have higher intentions to perform these behaviors. The path coefficient from attitudes to intentions is .62 in the model of scholastic orientation expectations and .41 in the model of activity orientation expectations. Based on these findings, hypothesis H06 was rejected.

Perceived Behavioral Control and Behavioral Intentions

H07: Mothers' perceived behavioral control will not affect their behavioral intentions toward achievement expectations.

A relationship between mothers' perceived behavioral control and their behavioral intentions was not found in either the model for scholastic orientation expectations or

the model for activity orientation expectations. The path coefficients were close to zero ($-.03$ and $.04$, respectively). Mothers' perceived behavioral control does not seem to influence their behavioral intentions. Therefore, hypothesis H07 was not rejected in either model.

Behavioral Intentions and Actual Behaviors

H08: Mothers' behavioral intentions regarding achievement expectations will not affect their actual child-rearing behaviors.

Mothers' behavioral intentions were shown to have strong and positive influences on their behaviors as regards to both scholastic orientation expectations and activity orientation expectations. The path coefficients for these links was $.33$ for the model of scholastic orientation expectations and $.24$ for the model of activity orientation expectations. Mothers who have higher intentions toward behaviors regarding certain achievement expectations do tend to perform these behaviors more often. Their intentions seem to lead to their behaviors. Hypothesis H08 was rejected in both.

Overall Model

For the exogenous variables in the study, relationships were found for both models, including 1) relationship between degree of collectivism and mothers' subjective norms, 2) relationship between one subscale from PARI ("trust parent

only" for model A and "feel trapped as a homemaker" for model B) and mothers' attitudes, 3) relationship between one subscale from the Developmental Expectation Questionnaire ("compliance") and mothers' attitudes, and 4) relationship between two subscales from Parenting Sense of Competence (parenting satisfaction and parenting efficacy) and mothers' perceived behavioral control. For the variables measured, based on the theory of planned behavior, all relationships were found to be significant except that between perceived behavioral control and behavioral intentions. Thus, this theory was found to be basically applicable for this study, with minor adjustment needed.

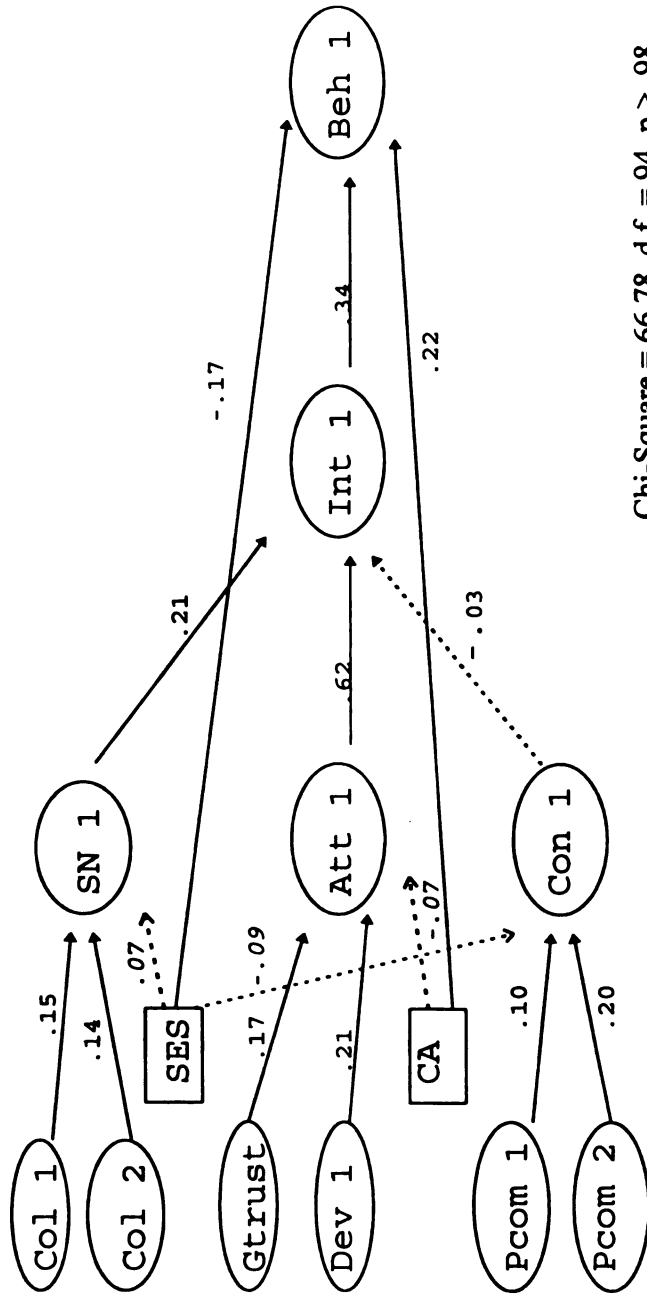
Individual Characteristics and Contextual Variables

Although the results discussed above showed a substantial degree of model fit for the data, with various factors having been found to contribute to mothers' child-rearing behaviors, the model still did not account for all of the variances. Relationships among these variables, therefore, were not fully explained. In order to further understand why mothers' behaviors could not be fully explained, and to examine whether additional variables not included in the theory influence the relationships among the original variables, a second set of path models was developed to enable additional hypotheses testing.

Various individual characteristics and contextual variables were included in this model. To match the pattern with the original model, two submodels, one for the scholastic orientation achievement expectations and one for the activity orientation achievement expectations, were established. For model A-2 (regarding scholastic oriented expectations), child age and family SES were added to the model. The result, presented in Figure 4.3 (chi-square= 66.78, d.f.= 94, $p > .98$), found that even with a weak link between child age and attitude (path coefficient= $-.07$, 68% confidence interval = $-.15$ to $.00$), the direct effect of child age on mothers' behaviors is very strong (path coefficient= $.22$; 68% confidence interval = $.15$ to $.28$).

This indicates that the influence of child age on mothers' behaviors regarding scholastic achievement expectations was not mediated through their subjective norms, attitudes, or perceived control; instead, the influence was directly linked to their behaviors. This result shows that, when children are younger, mothers are less likely to exercise child-rearing behaviors that are related to their expectations for children's scholastic achievement than when their children grow older.

Although family SES has a weak and positive influence on subjective norms (path coefficient = $.07$, 68% confidence interval = $.00$ to $.13$), and a weak and negative influence on perceived control (path coefficient = $-.09$, 68% confidence interval = $-.03$ to $-.15$), it has a negative and strong



Chi-Square = 66.78, d.f. = 94, $p > .98$

Col 1: Family Oriented Collectivism
 Col 2: General Group Oriented Collectivism
 Gtrust: General Belief-- Trust Parent Only
 Dev 1: Concept of Development-- Compliance
 Pcom 1: Parenting Satisfaction
 Pcom 2: Parenting Efficacy
 SES: Family SES

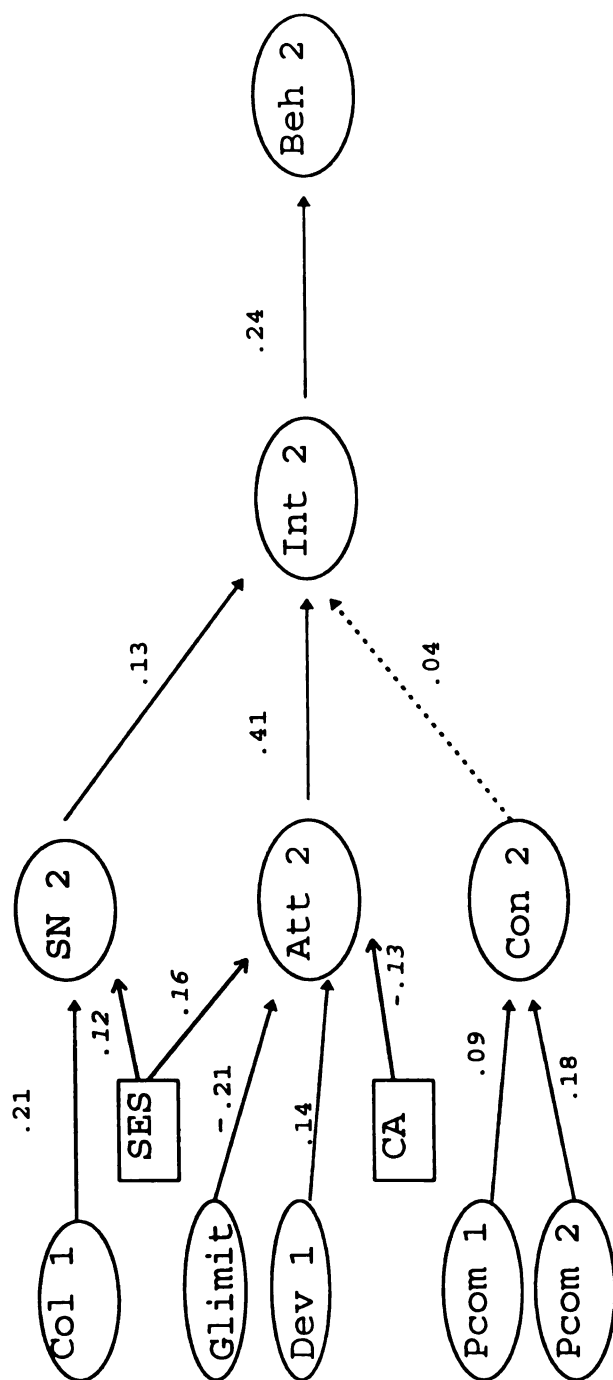
SN: Subjective Norm
 Att: Attitude
 Con: Perceived Control
 Int: Behavioral Intention
 Beh: Actual Behavior
 CA: Child Age

Figure 4.3 Path Model for Scholastic Orientation Expectations (Model A-2 : with Contextual Variables)

influence on behavior (path coefficient = $-.17$, 68% confidence interval = $-.11$ to $-.23$). This infers that the influence of family SES cannot be totally mediated through subjective norms, attitudes, or perceived control, but rather has direct influence on behavior regarding scholastic orientation expectations.

For model B-2 (activity orientation expectations), the two variables of child age and family SES were also added (Chi-Square = 95.98, d.f. = 97, $p > .51$). This path model is presented in Figure 4.4. Child age has a negative effect on mothers' attitude regarding activity orientation expectations (path coefficient = $-.13$, 68% confidence interval = $-.07$ to $-.20$). That is, mothers who have a younger child tend to have more favorable attitudes toward activity orientation child-rearing behaviors, while those who have an older child, who is approaching the stage of entering the elementary school, have less favorable attitudes toward these behaviors. It is possible that mothers who have a child who is going to enter elementary school in a short period of time have begun to think about the scholastic competition the child is going to face.

In this model, family SES has a positive effect both on mothers' subjective norms (path coefficient = $.12$, 68% confidence interval = $.06$ to $.18$) and on their attitudes (path coefficient = $.16$, 68% confidence interval = $.09$ to $.22$). Mothers with higher SES tend to view people that are important to them as having a more positive attitude toward behaviors



Chi-Square = 95.98, d.f. = 97, $p > .51$

Col 1: Family Oriented Collectivism	SN: Subjective Norm
Glimit: General Belief-- Feeling Trapped	Att: Attitude
Dev 1: Concept of Development-- Compliance	Con: Perceived Control
Pcom 1: Parenting Satisfaction	Int: Behavioral Intention
Pcom 2: Parenting Efficacy	Beh: Actual Behavior
SES: Family SES	CA: Child Age

Figure 4.4 Path Model for Activity Orientation Expectations (Model B-2: with Contextual Variables)

regarding activity orientation expectations. Thus, they themselves also tend to have a more positive attitude toward these behaviors.

Summary of Hypothesis Testing

A summary of all hypotheses testing is presented in Table 4.20 (for model A) and Table 4.21 (for model B).

Table 4.20

Summary of Hypothesis Testing for Model A-1
(Scholastic Orientation Expectations)

Statement of Null Hypothesis	Result of the Testing
H01: Degree of collectivism will not affect mothers' subjective norms regarding achievement expectations.	
Col 1: Family First	Rejected
Col 2: General Group Orientation	Rejected
H02: Mothers' general beliefs will not affect their specific child-rearing attitudes regarding achievement expectations.	
Gtrust: Trust Parent Only	Rejected
Gdem: Authoritative	Not Rejected
Gdecep: Deception	Not Rejected
Glimit: Feel Trapped	Not Rejected
H03: Mothers' concepts of development will not affect their specific child-rearing attitudes regarding achievement expectations.	
Dev 1: Compliance	Rejected
Dev 2: Independence	Not Rejected
Dev 3: School-related Skills	Not Rejected
Dev 4: Social Skills	Not Rejected
H04: Mothers' sense of competence will not affect their perceived child-rearing behavioral control regarding achievement expectations.	
Pcom 1: Parenting Satisfaction	Rejected
Pcom 2: Parenting Efficacy	Rejected
H05: Mothers' subjective norms will not affect their behavioral intentions regarding achievement expectations.	
SN 1: Subjective Norms	Rejected

Table 4.20 (cont'd)

H06: Mothers' child-rearing attitudes will not affect their behavioral intentions regarding achievement expectations.

Att 1: Attitudes

Rejected

H07: Mothers' perceived behavioral controls will not affect their behavioral intentions regarding achievement expectations.

Con 1: Perceived Control

Not Rejected

H08: Mothers' child-rearing behavioral intentions will not affect their actual child-rearing behaviors regarding achievement expectations.

Int 1: Behavioral Intentions

Rejected

Table 4.21

Summary of Hypothesis Testing for Model B-1
(Activity Orientation Expectations)

Statement of Null Hypothesis	Result of the Testing
H01: Degree of collectivism will not affect mothers' subjective norms regarding achievement expectations.	
Col 1: Family First	Rejected
Col 2: General Group Orientation	Not Rejected
H02: Mothers' general beliefs will not affect their specific child-rearing attitudes regarding achievement expectations.	
Gtrust: Trust Parent Only	Not Rejected
Gdem: Authoritative	Not Rejected
Gdecep: Deception	Not Rejected
Glimit: Feel Trapped	Rejected
H03: Mothers' concepts of development will not affect their specific child-rearing attitudes regarding achievement expectations.	
Dev 1: Compliance	Rejected
Dev 2: Independence	Not Rejected
Dev 3: School-related Skills	Not Rejected
Dev 4: Social Skills	Not Rejected
H04: Mothers' sense of competence will not affect their perceived child-rearing behavioral control regarding achievement expectations.	
Pcom 1: Parenting Satisfaction	Rejected
Pcom 2: Parenting Efficacy	Rejected
H05: Mothers' subjective norms will not affect their behavioral intentions regarding achievement expectations.	
SN 2: Subjective Norms	Rejected

Table 4.21 (cont'd)

H06: Mothers' child-rearing attitudes will not affect their behavioral intentions regarding achievement expectations.

Att 2: Attitudes

Rejected

H07: Mothers' perceived behavioral controls will not affect their behavioral intentions regarding achievement expectations.

Con 2: Perceived Control

Not Rejected

H08: Mothers' child-rearing behavioral intentions will not affect their actual child-rearing behaviors regarding achievement expectations.

Int 2: Behavioral Intentions

Rejected

CHAPTER V

DISCUSSION

This study was designed to assess mothers' perceptions of their achievement expectations and to examine the relationships between various antecedent variables and mothers' perceptions, and between their perceptions and their actual behaviors. A model was established for these links. In addition, several ecological variables were put into the model so that an exploratory study on relationships between these ecological variables and variables in the original model could be performed and an extended model could be established. In this chapter, the results of these effects pursuant to the development of different models and the establishment of relationships among various variables in these models will be discussed.

The Basic Model

The basic model was formed according to the theory of planned behavior (Ajzen, 1985). Five constructs were measured in the model, including mothers' subjective norms, attitudes, perceived behavioral control, behavioral intentions, and actual behaviors. As stated in the theory, three factors

including subjective norms, attitudes, and control, would combine to determine behavioral intentions, which in turn cause actual behaviors. In this study, two submodels were analyzed separately based on the characteristics of different achievement expectations as to their scholastic or activity orientation.

The results pursuant to these two submodels are quite similar. Of the three variables leading to mothers' behavioral intentions, the effect from their attitudes is strongest.

Mothers' subjective norms also were found to contribute to their behavioral intentions. Mothers who feel other people have positive attitudes toward certain child-rearing behaviors tend to be influenced by these positive attitudes and indicate higher intention to perform related behaviors.

The effect of mothers' perceived behavioral control on their behavioral intentions is the only hypothesis that is not supported in this basic model. It was hypothesized that mothers' perceived behavioral control will have positive effects on their behavioral intention. If mothers perceive themselves as having control over certain child-rearing behavior, they should tend to form stronger intentions and be more likely to exercise that behavior. It was found in both submodels, however, that only mothers' subjective norms and attitudes contributed to their behavioral intentions significantly. The effect of their perceived control was not found to be significant. There are several possible explanations for these results. First, when these mothers

evaluated how positively they viewed these achievement-expectations related behaviors, it is possible that they had already incorporated how much control they had in performing these behaviors when they formed their answers. If a mother thought a particular child-rearing behavior was good, yet she knew she was not in a position of "doing" it, her evaluation of how positive her attitude was toward this behavior could have been somewhat offset.

Another possible explanation is that, at this stage, children have not really started to face any "real" scholastic challenges and mothers haven't experienced any outcomes of competition among children regarding their non-scholastic specific skills. This gives mothers the sense that they are still in full control of their child-rearing behaviors concerning their expectations for their children. Therefore, as long as mothers hold favorable attitudes toward certain child-rearing behaviors, having control or not is not an issue in influencing their behavioral intentions. Once children enter elementary school, with feedback like report cards and outcomes from various kinds of competition regarding both scholastic achievement and extracurricular activities, mothers will be able to refer to these sources of feedback concerning their children's ranking in the class or in their neighborhood. Since not all children will be able to rank near the top in every category, it is likely that mothers will begin to feel they are losing control over their expectations and what they can or cannot do to help their children achieve.

These results may also indicate that the original "theory of reasoned action" (Fishbein and Ajzen, 1975) may be more applicable than the new "theory of planned behavior" (Ajzen, 1985). This will be discussed more extensively in later sections.

The final link in this model is the linkage from behavioral intention to mothers' behavior. The results indicate that mothers' behavioral intentions affected behaviors in both submodels. Mothers who have stronger behavioral intentions are more likely to perform those behaviors.

Antecedents and the Basic Model

The purpose of the inclusion of the antecedent variables was a better understanding of why mothers hold different attitudes, subjective norms, and perceived behavioral control toward certain child-rearing behaviors related to their expectations for their children's achievement. By looking at the basic model, as discussed above, we were able to conclude that mothers' subjective norms and attitudes will affect their behavioral intentions, and in turn, have causal impacts on their actual behaviors. Further questions include the following: What causes mothers to have different attitudes, subjective norms, or perceived control, and where do these "ideas" come from? Although knowing people's attitudes, subjective norms, and perceived control is extremely important

in understanding whether people will be engaged in certain behaviors or not, it is not sufficient. Researchers need to go beyond these direct links in the search for different combinations of reasons leading to people's attitudes, subjective norms, and perceived control. The inclusion of these antecedents provides a more systematic perspective of the linkages of variables directly or indirectly influencing peoples' behavioral intentions and, therefore, their behaviors. Four antecedents were included in this model: degree of collectivism, general beliefs, concepts of development, and parenting competence.

The antecedent variable linked to mothers' subjective norms is the degree of collectivism. Family oriented collectivism has been found to be positively and moderately related to mothers' subjective norms regarding both scholastic orientation expectations and activity orientation expectations, while collectivism overall is positively and moderately related to mothers' subjective norms regarding scholastic expectations only. In general, mothers who are more collectivistic tend to rate other people as having a more positive attitude toward child-rearing behaviors regarding achievement expectations, while those who are less collectivistic tend to rate other people's attitudes toward these behaviors as less positive.

These results indicate that not every mother perceives social norms in the same way, and one of the important factors contributing to this difference is their degree of

collectivism. This could be due to their perceptions of other people's thinking that has been filtered through their own interpretations, or it could be due to the fact that people who are important to these mothers also have higher degree of collectivism and, therefore, have more positive attitudes toward child-rearing behaviors regarding achievement expectations.

Individual Characteristics and Contextual Variables

In order to further understand why mothers' behaviors could not be fully explained using the basic model and to examine whether additional variables, not included in the theory, influence the relationships among the original variables, a second set of path models including various individual characteristics and contextual variables were tested.

For model A (regarding scholastic oriented expectations), child age and family SES were added to the model. The results showed that the influence of child age on mothers' behaviors regarding scholastic achievement expectations was not mediated through their subjective norms, attitudes, or perceived control; instead, the influence was directly linked to their behaviors. When children are younger, mothers are less likely to exercise child-rearing behaviors that are related to their expectations for children's scholastic achievement; as children grow older (gradually approaching the age of entering

elementary school), although mothers' attitudes were not shown to be different, they tend to become engaged more often in these behaviors.

Although family SES has a weak and positive influence on subjective norms and a weak and negative influence on perceived control, it has a negative and strong influence on behavior. This infers that the influence of family SES cannot be totally mediated through subjective norms, attitudes, or perceived control, but rather has direct influence on behavior regarding scholastic orientation expectations.

Mothers with higher SES tend to perform fewer behaviors regarding scholastic achievement expectations than those with lower SES. This indicates that although higher SES mothers hold positive attitudes, higher subjective norms, and higher perceived control toward behaviors regarding scholastic orientation expectations, they are not as involved in these behaviors as lower SES mothers. It is possible that limited available time makes it necessary for mothers to choose one dimension of child-rearing behaviors over another, particularly as regards to those involving more mother-child interaction time. When time is the issue, lower SES mothers may be preoccupied by children's scholastic achievements and thus perform more child-rearing behaviors regarding scholastic expectations than higher SES mothers.

For model B (activity orientation expectations), the two variables of child age and family SES were also added. Child age has a negative effect on mothers' attitude regarding

activity orientation expectations. That is, mothers who have a younger child tend to have more favorable attitudes toward activity orientation child-rearing behaviors, while those who have an older child, who is approaching the stage of entering the elementary school, have less favorable attitudes toward these behaviors. It is possible that mothers who have a child who is going to enter elementary school in a short period of time have begun to think about the scholastic competition the child is going to face. They may wish to put more efforts into preparing their children and therefore need to de-emphasize the importance of other activities.

Family SES has a positive effect both on mothers' subjective norms and on their attitudes. Mothers with higher SES tend to view people that are important to them as having a more positive attitude toward behaviors regarding activity orientation expectations. Thus, they themselves also tend to have a more positive attitude toward these behaviors. It is likely that mothers who have higher family SES not only view that, in addition to scholastic achievements, attending or experiencing some extracurricular activities is also beneficial to their children, but also tend to have more time and other resources that allow them to offer their children opportunities of achievement in a different dimension. Although they think behaviors regarding scholastic achievement are good, they also try to seek a balance between these two sets of expectations.

Although additional variables added in this model did not appear to have accounted for any direct links to mothers' behaviors, they did help clarify what additional factors (besides collectivism, general beliefs, and concepts of development) may have exerted influences on mothers' subjective norms and attitudes. This certainly is helpful to the researcher in achieving a more detailed understanding of the entire model.

CHAPTER VI
LIMITATIONS, CONTRIBUTIONS, IMPLICATIONS,
AND SUGGESTIONS FOR FUTURE RESEARCH

In this chapter, the limitations, contributions, and implications of the study will be addressed. Suggestions for future research will also be proposed.

Limitations

The primary limitation of the study is reflected in the nature of the data. Assessments included only the subjects' self-reports through questionnaires. It was not possible to gather observational data. If mothers' actual behavior could have been observed, or other family could have provided reports of mothers' actual behaviors, a stronger case could be made for the validity of the data.

Although using questionnaires to assess mothers' beliefs and attitudes is a better method in the sense that mothers' have more privacy thus their apprehension concerning others' response can be reduced, and, given the busy schedule accompanying parenthood, this is more convenient for them (Holden and Coleman, 1992), it is not without shortcomings. Holden and Edwards (1989) argued that vague and ambiguous

items in self-report forms are often interpreted in different ways by different parents, and further, that most questionnaires have limited or unknown psychometric properties (i.e., reliability and validity). In this study, reliabilities were reported for all constructs, and confirmatory factor analyses were also performed to provide validity information. Although efforts were made to improve the validity of each construct, and a number of bad items were eliminated from the constructs, there may still be items in the analysis that may have been interpreted in different ways by different mothers.

The self selecting nature of the sample is an additional limitation. Information was obtained only from mothers who were cooperative in answering the questionnaire and returning it to the kindergarten teacher. Information from those mothers who decided not to participate in the study was not available.

Cultural limitation should also be addressed. This study was conducted in Taiwan and the sample consists of Taiwanese mothers only. Results of this study should not be used without taking various contextual variables in this particular region or any other factors specific to this culture into consideration.

Finally, the data were obtained only for the mother. The primary focus of the present study was on mothers' child-rearing attitudes and behaviors. Although other people's attitudes were addressed (through mothers' evaluation on their subjective norms), more detailed information may be needed to further determine the influence of family transactions on

mothers' child-rearing attitudes and behaviors.

Contributions

By utilizing the theory of planned behavior, the present study opens another door for researchers who wish to examine the relationship between parents' attitudes and their behaviors, and the relationships between parents' child-rearing behaviors and child outcomes. At least two important issues should be addressed as contributions of the model. First, it is clear that knowing mothers' child-rearing attitudes alone will not be enough for us to predict mothers' child-rearing behaviors in Taiwan; there is at least one additional factor that is in need of examination, the mother's subjective norms. Goodnow and Collins (1990) discussed the effect of "public opinion" on parents' ideas. This was assessed in the present study by asking mothers' to evaluate their subjective norms.

Second, it would appear important that the theory of planned behavior be employed to help explain the limited degree of linkages between mothers' attitudes and their child-rearing behaviors, as well as mothers' subjective norms and those behaviors. Mothers' subjective norms and child-rearing attitudes usually do not directly exert influences on children's behaviors. The influences are mediated through mothers' behavioral intentions. Results from various studies have shown that parents' attitudes do not necessarily lead to

their actual behaviors, and the reasons behind these results have remained unclear. The utilization of the theory of planned behavior in this study has provided an alternative way for researchers who are interested in related subjects to analyze parents' attitudes and parents' behaviors more thoroughly and explicitly.

Antecedents to the model of planned behavior and other contextual variables were included in the present study. An extension of the model of planned behavior applicable for research related to parenting attitudes was also established in the present study. By establishing an extended model, factors leading to mothers' child-rearing attitudes, subjective norms, and perceived behavioral control were identified and the relationships between these factors and other variables were examined.

Implications

The results of the model tested in this study indicate that mothers' attitudes lead to actual behaviors, as mediated through their behavioral intentions. The present study also confirms that mothers' behavioral intentions are not determined by their attitudes alone, but are also influenced by mothers' subjective norms (Liska, 1984). Mothers' child-rearing behaviors, therefore, would seem to be directly determined by their behavioral intentions, and indirectly by their subjective norms and their attitudes.

The results linking mothers' subjective norms and attitudes to their behavioral intentions, and thus to their behaviors, should be helpful to researchers and professionals who deal with children and families. Lack of the knowledge as to why mothers perform certain child-rearing behaviors that are harmful to their children makes the prevention of these behaviors very difficult. By examining mothers' psychological attributes relating to parenting, teachers or other professionals dealing with children or families can offer programs or opportunities either to educate mothers about their inappropriate or unrealistic expectations, or to help them find a better approach to certain child-rearing behaviors.

As presented in the results and the discussion section, the model of planned behavior was supported partially but not entirely. The aspect that was not supported was the relationship between mothers' perceived behavioral control and their behavioral intentions. This is a unique result that needs to be further researched. The theory of reasoned action by Fishbein and Ajzen(1975) is the model that the theory of planned behavior is derived from. The only difference between these two theories is that the variable of perceived behavioral control does not exist in the original theory (theory of reasoned action). The original rationale expressed by Ajzen and Fishbein suggested that two factors, attitudes and subjective norms, combine to affect an individual's behavioral intentions. The factor of perceived behavioral

control was not included. It was following additional study and critical analyses that Ajzen and Fishbein proceeded to reevaluate the original theory and proposed the new one known as the theory of planned behavior (1980).

There are still controversies regarding these two similar yet different theories. In the present study, the results support the model without the variable of perceived behavioral control. The results of this study indicate no significant effect of perceived behavioral control on mothers' behavioral intentions. Although Ajzen and Fishbein have proposed the possibility that perceived behavioral control could skip the effect on behavioral intentions and exert effects directly on the person's behaviors, that relationship was not found in this study. Not only did perceived behavioral control not exert influences on behavioral intentions, it did not exert influences on behaviors. In this case, for the data in this ecological context (Taiwan), we may be dealing with a situation where the original theory of reasoned action is more applicable than the revised theory of planned behavior.

What forms the basis for these results? Why does mothers' perceived behavioral control not affect their behavioral intentions? First, it is possible that when mothers were asked about their attitudes, they may have incorporated their evaluations of how much control they have into their evaluations of their own attitudes. In other words, if they feel they do not have control over certain behaviors, they do not view the attitudes regarding these behaviors as

favorable. Second, it is also possible that for the behaviors regarding child-rearing, these behaviors in the scales of achievement expectations represent the behaviors that parents always have control over. If this is the case, an additional question regarding their perceived behavioral control would not add any explanatory power to what's already been asked in the questionnaire.

In this study, the possible direct relationship between perceived behavioral control and actual behaviors proposed by Ajzen and Fishbein was not found. It is possible that mothers may have answered the questions regarding their control by rating their perceived behavioral control based on their own "ability" of performing certain behaviors without taking other contextual factors that may affect the control they have over certain child-rearing behaviors into consideration. In this case, more in-depth questions regarding issues like contextual constraints that may affect the degree of control mothers have over specific child-rearing behaviors should be added, instead of using just one general question to cover everything.

Future Research

Relationships among Antecedent Variables

One of the main focuses of this study was to examine the relationships between various antecedent variables and mothers' perceptions of their expectations. Although

relationships among various antecedent variables were not discussed, an interesting finding was observed. It was found in the correlation matrix that, although the factor of parenting satisfaction and the factor of parenting efficacy were obtained from the scale of Parenting Sense of Competence and should represent mothers' self-esteem regarding parenting, these two factors hold opposite correlational relationships with the factor "Gtrust" (a subconstruct of mothers' general belief indicating children should trust their parents only). Parenting satisfaction was positively correlated with Gtrust, while parenting efficacy was negatively correlated with Gtrust. That is, mothers who are satisfied with their role as a parent are those who believe that children should only listen to their own mothers' opinions and instructions while, on the other hand, mothers who have higher parenting efficacy do not think they should prevent their children from listening to other people's opinions. This indicates that the term self-esteem needs to more clearly defined, especially when defining self-esteem in relation to parenting. Further research is needed, therefore, to investigate these factors and sort out ways to explain these ambivalent relationships. In addition, future research focusing on identifying a proper construct with clear definitions, and on examining relationships between parents' self-esteem and other psychological attributes, will be useful.

An Ecological Approach

The ecological variables, such as home-school interface and family type, did not show significant influence on mothers' attitudes, subjective norms, perceived controls, child-rearing intentions, or child-rearing behaviors in this study. In addition, they did not seem to help elaborate the overall model (except for family SES). It is possible that the effects of these variables on mothers' behavioral intentions or actual behaviors have been accounted for by other variables already existing in the model. It is also possible that the operationalization of these ecological variables was not established well, as the measurement of these constructs was very limited. Future research focusing both on establishing the constructs and their proper measurement, and on assessing the influences of these ecological factors on mothers' various psychological characteristics, behavioral intentions, and their child-rearing behaviors, will help to further incorporate the theory of planned behavior into the ecological models of parenting and child development.

More ecological variables which are more dynamic and interactive oriented should also be included in future studies. For example, the quality of the marital relationship between two parents was not measured extensively in this study. Knowing that a particular child comes from either a two-parent or a single-parent household will not give us enough information about the transactive relationships among the family members. More in-depth interview or observations of

the family members may provide further information that will help researchers explore the impacts of ecological factors on parenting or child development.

Mothers' Attitudes and Child Outcomes

The focus of this study was to analyze the effects of various antecedent variables on mothers' subjective norms, attitudes, and perceived behavioral control, and to evaluate the linkages between these variables and mothers' behavioral intentions and their actual child-rearing behaviors. Findings of this study can serve as an important first step toward a series of studies focusing on examining relationships among mothers' child-rearing attitudes, child-rearing behaviors, and child outcomes. As categorized by Palacios et al. (1992), mothers exert influences on their children both directly and indirectly. Observing or collecting data on mothers' behaviors only will not give researchers a clear picture of how mothers act to affect their children's behaviors or outcomes. It is only after we also understand mothers' ideas about their children and about child-rearing that will we be able to realize and explain the profound influences of mothers on their children.

Comparative Studies

The present study is based upon the data collected in Taiwan. The research findings may reflect certain characteristics that are unique to the culture or a result of

certain geographical factors. In order to establish a global, holistic model presenting influences of various factors on mothers' child-rearing behaviors, it will be necessary for researchers to collect data from other countries. Although the theory of planned behavior was first applied to the subjects in the United States, those studies did not focus on parenting. It may be necessary for researchers to utilize the model presented in the present study while collecting data from U.S. subjects as well as subjects from other countries. Comparative studies based on data collected from other cultures will help researchers generate a more applicable model regarding mothers' child-rearing ideas and behaviors from different cultures, as well as assist them in identifying unique child-rearing features existing in both.

APPENDICES

APPENDIX A

APPENDIX A

QUESTIONNAIRE

A. Parent Attitude Research Instrument

1. Children should be allowed to disagree with their parents if they feel their own ideas are better.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. When a parent asks a child to do something the child should always be told why.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. A child should be taught that there are many other people he will love and respect as much or more than his own parents.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. Children should never learn things outside the home which make them doubt their parents' ideas.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

5. Having to be with the children all the time gives a woman the feeling her wings have been clipped.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

6. Parents very often feel that they can't stand their children a moment longer.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

7. There's no excuse wasting a lot of time explaining when you can get kids doing what you want by being a little clever.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

8. Children have every right to question their parents' views.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

9. A child should grow up convinced his parents always know what is the right thing to do.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
10. One of the worst things about taking care of a home is that a woman feels that she can't get out.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
11. Most parents can spend all day with the children and remain calm and even tempered.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
12. Children should be encouraged to tell parents about it whenever they feel family rules are unreasonable.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
13. Parents should adjust to the children sometimes rather than always expecting the children to adjust to the parents.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
14. Most children soon learn that their parents were mistaken in many of their ideas.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
15. A young mother feels "held down" because there are lots of things she wants to do while she is young.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
16. There is no excusing someone who upsets the confidence a child has in his parents' ways of doing things.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
17. The things children ask of a parent after a hard day's work are enough to make anyone lose his temper at times.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**
18. Often you have to fool children to get them to do what they should without a big fuss.
- Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree**

19. If a parent is wrong he should admit it to his child.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
20. Most young mothers are bothered more by the feeling of being shut up in the home than by anything else.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
21. A child soon learns that there is no wisdom than that of his parents.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
22. A parent should keep control of his temper even when children are demanding.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
23. A child's ideas should be seriously considered in making family decisions.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
24. In a well-run home, children should have things their own way as often as the parents do.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
25. One of the bad things about raising children is that you aren't free enough of the time to do just as you like.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
26. Loyalty on the part of children to their parents is something that the parents should earn.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
27. A parent should never be made to look wrong in a child's eyes.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
28. It's natural for a parent to "blow his top" when children are selfish and demanding.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

29. It's best to trick a child into doing something he doesn't want to do instead of having to argue with him.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

30. Husbands should know how "hemmed in" a woman feels staying in the home a great deal.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

31. A good parent can tolerate criticism of himself even when the children are around.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

32. Loyalty to parents comes before anything else.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

33. Raising children is an easy job.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

34. When a child is in trouble he ought to know he won't be punished for talking about it with his parents.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

35. It isn't fair that men have a chance for interesting work and women mostly have to do the hard job of keeping the home.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

36. As much as it is reasonable, a parent should try to treat a child as an equal.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

37. A parent should not expect to be more highly esteemed than other worthy adults in their children's eyes.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

38. It's best for the child if he never gets started wondering whether his parents' view are right.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

39. It's a rare parent who can be even tempered with his children all day.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

40. Raising children is very much harder than most jobs men do.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

41. You have to fool children into doing many things because they wouldn't understand anyway.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

42. When a child thinks his parent is wrong he should say so.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

43. More parents should teach their children to have unquestioning loyalty to them.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

44. Most parents never get to the point where they can't stand their children.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

45. A child has a right to his own point of view and ought to be allowed to express it.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

46. Children are too often asked to do all the compromising and adjustment and that is not fair.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

47. Loyalty to parents is an overemphasized virtue.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

48. The child should not question the thinking of his parents.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

49. Raising children is a nerve-racking job.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

50. When a child is doing something he shouldn't do, one of the best ways of handling it is to just get him interested in something else.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

51. A child should be encouraged to look for answers to his questions from other people even if the answers contradict his parents'.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

52. A child should always love his parents above everything else.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

53. There is no reason why a day with the children should be upsetting.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

B. Parenting Sense of Competence Scale

1. The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

5. My mother/father was better prepared to be a good mother/father than I am.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

6. I would make a fine model for a new mother/father to follow in order to learn what she/he would need to know in order to be a good parent.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

7. Being a parent is manageable, and any problems are easily solved.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

8. A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

9. Sometimes I feel like I'm not getting anything done.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

10. I meet my own personal expectations for expertise in caring for my child.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

11. If anyone can find the answer to what is troubling my child, I am the one.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

12. My talents and interests are in other areas, not in being a parent.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

13. Considering how long I've been a mother/father, I feel thoroughly familiar with this role.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

14. If being a mother/father of a child were only more interesting, I would be motivated to do a better job as a parent.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

15. I honestly believe I have all the skills necessary to be a good mother/father to my child.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

16. Being a parent makes me tense and anxious.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
17. Being a good mother/father is a reward in itself.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

C. Developmental Expectations Questionnaire

(a) Compliance

1. Comes or answers when called.
☐ Before age four ☐ Between ages four and six ☐ After age six
2. Does not do things forbidden by parents.
☐ Before age four ☐ Between ages four and six ☐ After age six
3. Stops misbehaving when told.
☐ Before age four ☐ Between ages four and six ☐ After age six
4. Does task immediately when told.
☐ Before age four ☐ Between ages four and six ☐ After age six
5. Gives up reading or TV to help mother.
☐ Before age four ☐ Between ages four and six ☐ After age six

(b) Independence

6. Stays home alone for an hour or so.
☐ Before age four ☐ Between ages four and six ☐ After age six
7. Takes care of own clothes.
☐ Before age four ☐ Between ages four and six ☐ After age six
8. Makes phone calls without help.
☐ Before age four ☐ Between ages four and six ☐ After age six

9. Sits at table and eats without help.

☐ Before age four ☐ Between ages four and six ☐ After age six

10. Does regular household tasks.

☐ Before age four ☐ Between ages four and six ☐ After age six

11. Spends own money carefully.

☐ Before age four ☐ Between ages four and six ☐ After age six

12. Can entertain himself alone.

☐ Before age four ☐ Between ages four and six ☐ After age six

13. Plays outside without adult supervision.

☐ Before age four ☐ Between ages four and six ☐ After age six

(c) School-related skills

14. Can tell time up to quarter hour.

☐ Before age four ☐ Between ages four and six ☐ After age six

15. Read aloud a 30-page picture book.

☐ Before age four ☐ Between ages four and six ☐ After age six

16. Look up things in picture encyclopedia.

☐ Before age four ☐ Between ages four and six ☐ After age six

17. Knows surname.

☐ Before age four ☐ Between ages four and six ☐ After age six

18. Counts 1-10.

☐ Before age four ☐ Between ages four and six ☐ After age six

19. Knows color names.

☐ Before age four ☐ Between ages four and six ☐ After age six

20. Knows shape names.

☐ Before age four ☐ Between ages four and six ☐ After age six

21. Holds pencil easily.

☐ Before age four ☐ Between ages four and six ☐ After age six

22. Knows alphabet.

☐ Before age four ☐ Between ages four and six ☐ After age six

23. Writes own name.

☐ Before age four ☐ Between ages four and six ☐ After age six

24. Knows days of week.

☐ Before age four ☐ Between ages four and six ☐ After age six

(d) Social skills

25. Waits for his/her turn in games.

☐ Before age four ☐ Between ages four and six ☐ After age six

26. Shares his/her toys with other children.

☐ Before age four ☐ Between ages four and six ☐ After age six

27. Sympathetic to feelings of children.

☐ Before age four ☐ Between ages four and six ☐ After age six

28. Resolves disagreements without fighting.

☐ Before age four ☐ Between ages four and six ☐ After age six

29. Gets his/her way by persuading friends.

☐ Before age four ☐ Between ages four and six ☐ After age six

30. Takes initiative in playing with others.

☐ Before age four ☐ Between ages four and six ☐ After age six

D. Scale of Collectivism

1. I usually sacrifice my self-interest for the benefit of my group.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
2. Children should be taught to place duty before pleasure.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
3. It is important to me that I respect decisions made by my groups.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
4. Family members should stick together, no matter what sacrifices are required.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
5. Parents and children must stay together, as much as possible.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
6. It is my duty to take care of my family, even when I have to sacrifice what I want.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
7. I respect the majority's wishes in groups of which I am a member.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
8. It is important to consult close friends and get their ideas before making a decision.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
9. I usually sacrifice my self-interest for the benefit of my family.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree
10. It is important to consult other family members and get their ideas before making a decision.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

11. Special occasions of family union are very important to me.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

E. Scale of Achievement Expectation

(a) Attitudes

1. Help your child learn numbers, the alphabet, etc.

Unfavorable 1 2 3 4 5 6 7 Favorable

2. Read to your child

Unfavorable 1 2 3 4 5 6 7 Favorable

3. Ask your child to read (to himself/herself or to you)

Unfavorable 1 2 3 4 5 6 7 Favorable

4. Play educational games with your child

Unfavorable 1 2 3 4 5 6 7 Favorable

5. Buy educational goods (books, magazines, educational toys or games, etc.) for your child

Unfavorable 1 2 3 4 5 6 7 Favorable

6. Take your child to library, book store

Unfavorable 1 2 3 4 5 6 7 Favorable

7. Take your child to visit places (museum, concert, fair, etc.)

Unfavorable 1 2 3 4 5 6 7 Favorable

8. Send your child to special lessons or activities (arithmetics, music lessons, drawing, etc.)

Unfavorable 1 2 3 4 5 6 7 Favorable

9. Encourage your child to do well or get good evaluation from the teacher in the kindergarten

Unfavorable 1 2 3 4 5 6 7 Favorable

10. Help your child with his/her homework or project

Unfavorable 1 2 3 4 5 6 7 Favorable

(b) Subjective Norms

1. Most people who are important to you would probably consider your helping your child learn numbers, the alphabet, etc. to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

2. Most people who are important to you would probably consider your reading to your child to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

3. Most people who are important to you would probably consider your asking your child to read (to himself/herself, or to you) to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

4. Most people who are important to you would probably consider your playing educational games with your child to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

5. Most people who are important to you would probably consider your buying educational goods (books, magazines, educational toys or games, etc.) for your child to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

6. Most people who are important to you would probably consider your taking your child to library, book store to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

7. Most people who are important to you would probably consider your taking your child to visit places (museum, concert, fair, etc.) to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

8. Most people who are important to you would probably consider your sending your child to special lessons or activities (arithmetics, music lessons, drawing, etc.) to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

9. Most people who are important to you would probably consider your encouraging your child to do well or get good evaluation from the teacher in the kindergarten to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

10. Most people who are important to you would probably consider your helping your child with his/her homework or project to be _____

Extremely bad 1 2 3 4 5 6 7 Extremely good

(c) Perceived Behavioral Control

1. How much control do you have over whether you do or do not help your child learn numbers, the alphabet, etc.?

Very little control 1 2 3 4 5 6 7 Complete control

2. How much control do you have over whether you do or do not read to your child?

Very little control 1 2 3 4 5 6 7 Complete control

3. How much control do you have over whether you do or do not ask your child to read (to himself/herself or to you)?

Very little control 1 2 3 4 5 6 7 Complete control

4. How much control do you have over whether you do or do not play educational games with your child?

Very little control 1 2 3 4 5 6 7 Complete control

5. How much control do you have over whether you do or do not buy educational goods (books, magazines, educational toys or games, etc.) for your child?

Very little control 1 2 3 4 5 6 7 Complete control

6. How much control do you have over whether you do or do not take your child to library, book store?

Very little control 1 2 3 4 5 6 7 Complete control

7. How much control do you have over whether you do or do not take your child to visit places (museum, concert, fair, etc.)?

Very little control 1 2 3 4 5 6 7 Complete control

8. How much control do you have over whether you do or do not send your child to special lessons or activities (arithmetics, music lessons, drawing, etc.)?

Very little control 1 2 3 4 5 6 7 Complete control

9. How much control do you have over whether you do or do not encourage your child to do well or get good evaluation from the teacher in the kindergarten?

Very little control 1 2 3 4 5 6 7 Complete control

10. How much control do you have over whether you do or do not help your child with his/her homework or project?

Very little control 1 2 3 4 5 6 7 Complete control

(d) Intentions

1. You will try to help your child learn numbers, the alphabet, etc.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

2. You will try to read to your child.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

3. You will try to ask your child to read (to himself/herself or to you).

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

4. you will try to play educational games with your child.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

5. You will try to buy educational goods (books, magazines, educational toys or games, etc.) for your child.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

6. You will try to take your child to library, book store.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

7. You will try to take your child to visit places (museum, concert, fair, etc.).

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

8. You will try to send your child to special lessons or activities (arithmetics, music lessons, drawing, etc.).

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

9. You will try to encourage your child to do well or get good evaluation from the teacher in the kindergarten.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

10. You will try to help your child with his/her homework or project.

Extremely low intention 1 2 3 4 5 6 7 Extremely high intention

(e) Behaviors

1. How often did you help your child learn numbers, the alphabet, etc. during the past week?

☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more

2. How often did you read to your child during the past week?

☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more

3. How often did you ask your child to read (to himself/herself or to you) during the past week?

☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more

4. How often did you play educational games with your child during the past week?
- ☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more
5. How often did you buy educational goods (books, magazines, educational toys or games, etc.) for your child during the past month?
- ☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more
6. How often did you take your child to library, book store during the past month?
- ☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more
7. How often did you take your child to visit places (museum, concert, fair, etc.) during the past month?
- ☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more
8. Did you send your child to special lessons or activities (arithmetics, music lessons, drawing, etc.) during the past month?
- ☐ Yes ☐ No
9. Did you encourage your child to do well or get good evaluation from the teacher in the kindergarten during the past month?
- ☐ Yes ☐ No
10. How often did you help your child with his/her homework or project during the past week?
- ☐ Never ☐ Once ☐ Three or ☐ Five or ☐ Seven times
 or twice four times six times or more

APPENDIX B

APPENDIX B

Construct Correlations for Path Model A

	SN1	Att1	Con1	Int1	Beh1	Col1	Col2	Gtrust	Gdem	Gdecep
SN1	1.000	.378"	.291"	.431"	.293"	.216"	.204"	.137"	-.098	-.063
Att1	.378"	1.000	.195"	.689"	.315"	.183"	.163"	.212"	-.022	-.063
Con1	.291"	.195"	1.000	.153"	.122"	.069	.106"	.015	-.009	-.084
Int1	.431"	.689"	.153"	1.000	.327"	.179"	.124"	.180"	-.098	-.064
Beh1	.293"	.315"	.122"	.327"	1.000	.041	.027	.146"	-.009	.006
Col1	.216"	.183"	.069	.179"	.041	1.000	.495"	.087	-.259"	-.092
Col2	.204"	.163"	.106"	.124"	.027	.495"	1.000	.178"	-.198"	-.107"
Gtrust	.137"	.212"	.015	.180"	.146"	.087	.178"	1.000	-.007	.181"
Gdem	-.098	-.022	-.009	-.098	-.009	-.259"	-.198"	-.007	1.000	.171"
Gdecep	-.063	-.063	-.084	-.064	.006	-.092	-.107"	.181"	.171"	1.000
Glimit	.050	-.034	.008	-.032	-.066	-.029	-.070	.050	.056	.311"
Dev1	.095	.238"	.059	.212"	.103	-.007	.093	.193"	-.083	-.019
Dev2	.026	.122"	-.058	.161"	.024	.072	.006	-.036	-.141"	-.067
Dev3	.112"	.068	.029	.113"	-.086	.084	.011	-.243"	-.129"	-.091
Dev4	.067	.079	.009	.084	-.072	.055	.102	-.119"	-.147"	-.112"
Pcom1	.186"	.090	.144"	.103	.132"	.185"	.115"	.150"	-.125"	.060
Pcom2	.041	-.007	.210"	.027	.002	.058	.101	-.206"	-.089	-.294"
Fses	.064	-.099	-.044	.003	-.165"	.042	-.061	-.264"	-.106	-.183"
CA	.068	-.054	.040	-.080	.184"	-.180"	-.065	.017	.012	-.057

Construct Correlations for Path Model A (Cont'd)

	Glimit	Dev1	Dev2	Dev3	Dev4	Pcom1	Pcom2	Fses	CA
SN1	.050	.095	.026	.112*	.067	.186**	.041	.064	.068
Att1	-.034	.238**	.122*	.068	.079	.090	-.007	-.099	-.054
Con1	.008	.059	-.058	.029	.009	.144**	.210**	-.044	.040
Int1	-.032	.212**	.161**	.113*	.084	.103	.027	.003	-.080
Beh1	-.066	.103	.024	-.086	-.072	.132*	.002	-.165**	.184**
Col1	-.029	-.007	.072	.084	.055	.185**	.058	.042	-.180**
Col2	-.070	.093	.006	.011	.102	.115*	.101	-.061	-.065
Gtrust	.050	.193**	-.036	-.243**	-.119*	.150**	-.206**	-.264**	.017
Gdem	.056	-.083	-.141**	-.129*	-.147**	-.125*	-.089	-.106	.012
Gdecep	.311**	-.019	-.067	-.091	-.112*	.060	-.294**	-.183**	-.057
Glimit	1.000	-.088	-.071	.035	-.000	-.038	-.412**	.036	.049
Dev1	-.088	1.000	.377**	.141**	.287**	.072	.014	-.148**	.080
Dev2	-.071	.377**	1.000	.353**	.375**	.043	.144**	.094	.003
Dev3	.035	.141**	.353**	1.000	.458**	.070	.186**	.274**	.018
Dev4	-.000	.287**	.375**	.458**	1.000	.089	.128*	.179**	.068
Pcom1	-.038	.072	.043	.070	.089	1.000	.249**	.075	.027
Pcom2	-.412**	.014	.144**	.186**	.128*	.249**	1.000	.182**	-.115*
Fses	.036	-.148**	.094	.274**	.179**	.075	.182**	1.000	.020
CA	.049	.080	.003	.018	.068	.027	-.115*	.020	1.000

* - Signif < .05

** - Signif < .01 (2-tailed)

Construct Correlations for Path Model B

	SN2	Att2	Con2	Int2	Beh2	Col1	Col2	Gtrust	Gdem	Gdecep
SN2	1.000	.376"	.285"	.295"	.119'	.212"	.120'	.023	-.163"	-.052
Att2	.376"	1.000	.182"	.470"	.315"	.176"	.114'	-.042	-.181"	-.208"
Con2	.285"	.182"	1.000	.151"	.023	.145"	.062	-.094	-.089	-.062
Int2	.295"	.470"	.151"	1.000	.242"	.166"	.097	-.067	-.146"	-.108'
Beh2	.119'	.315"	.023	.242"	1.000	-.005	-.024	.084	-.001	.027
Col1	.212"	.176"	.145"	.166"	-.005	1.000	.495"	.087	-.259"	-.092
Col2	.120'	.114'	.062	.097	-.024	.495"	1.000	.178"	-.198"	-.107'
Gtrust	.023	-.042	-.094	-.067	.084	.087	.178"	1.000	-.007	.181"
Gdem	-.163"	-.181"	-.089	-.146"	-.001	-.259"	-.198"	-.007	1.000	.171"
Gdecep	-.052	-.208"	-.062	-.108'	.027	-.092	-.107'	.181"	.171"	1.000
Glimit	-.068	-.222"	.014	-.101	-.139"	-.029	-.070	.050	.056	.311"
Dev1	.047	.121'	-.010	.122'	.083	-.007	.093	.193"	-.083	-.019
Dev2	.139"	.188"	-.040	.128'	.084	.072	.006	-.036	-.141"	-.067
Dev3	.094	.116'	.073	.155"	.013	.084	.011	-.243"	-.129'	-.091
Dev4	.042	.144"	-.030	.112'	-.027	.055	.102	-.119'	-.147"	-.112'
Pcom1	.097	.222"	.134'	.122'	.215"	.185"	.115'	.150"	-.125'	.060
Pcom2	.185"	.236"	.199"	.109'	.090	.058	.101	-.206"	-.089	-.294"
Fses	.132'	.129'	.044	.160"	-.027	.042	-.061	-.264"	-.106	-.183"
CA	-.103	-.128'	-.116'	-.137'	.037	-.180"	-.065	.017	.012	-.057

Construct Correlations for Path Model B (Cont'd)

	Glimit	Dev1	Dev2	Dev3	Dev4	Pcom1	Pcom2	Fses	CA
SN2	-.068	.047	.139**	.094	.042	.097	.185**	.132*	-.103
Att2	-.222**	.121*	.188**	.116*	.144**	.222**	.236**	.129*	-.128*
Con2	.014	-.010	-.040	.073	-.030	.134*	.199**	.044	-.116*
Int2	-.101	.122*	.128*	.155**	.112*	.122*	.109*	.160**	-.137*
Beh2	-.139**	.083	.084	.013	-.027	.215**	.090	-.027	.037
Coll	-.029	-.007	.072	.084	.055	.185**	.058	.042	-.180**
Col2	-.070	.093	.006	.011	.102	.115*	.101	-.061	-.065
Gtrust	.050	.193**	-.036	-.243**	-.119*	.150**	-.206**	-.264**	.017
Gdem	.056	-.083	-.141**	-.129*	-.147**	-.125*	-.089	-.106	.012
Gdecep	.311**	-.019	-.067	-.091	-.112*	.060	-.294**	-.183**	-.057
Glimit	1.000	-.088	-.071	.035	-.000	-.038	-.412**	.036	.049
Dev1	-.088	1.000	.377**	.141**	.287**	.072	.014	-.148**	.080
Dev2	-.071	.377**	1.000	.353**	.375**	.043	.144**	.094	.003
Dev3	.035	.141**	.353**	1.000	.458**	.070	.186**	.274**	.018
Dev4	-.000	.287**	.375**	.458**	1.000	.089	.128*	.179**	.068
Pcom1	-.038	.072	.043	.070	.089	1.000	.249**	.075	.027
Pcom2	-.412**	.014	.144**	.186**	.128*	.249**	1.000	.182**	-.115*
Fses	.036	-.148**	.094	.274**	.179**	.075	.182**	1.000	.020
CA	.049	.080	.003	.018	.068	.027	-.115*	.020	1.000

* - signif < .05

** - signif < .01 (2-tailed)

BIBLIOGRAPHY

BIBLIOGRAPHY

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl and J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 11-39). New York: Springer-Verlag.
- Ajzen, I., and Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I., and Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453-474.
- Bandura, A. (1982). Self-efficacy in human agency. *American Psychologist*, 37, 122-147.
- Banner, C. N. (1979). Child-rearing attitudes of mothers of under-, average-, and over-achieving children. *British Journal of Educational Psychology*, 49, 150-155.
- Bartlett, E. W., and Smith, C. P. (1966). Childrearing practices, birth order and the development of achievement-related motives. *Psychological Reports*, 19, 1207-1216.
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1-62). San Diego, CA: Academic Press.
- Bentler, P. M., and Speckart, G. (1979). Models of attitude-behavior relations. *Psychological Review*, 86, 452-464.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bugental, D. B., and Shennum, W. A. (1984). "Difficult" children as elicitors and targets of adult communication patterns: An attributional-behavioral transactional analysis. *Monographs of the Society for Research in Child Development*, 49(1, Serial No.205).

- Caldwell, B., and Bradley, R. (1984). *Home Observation for Measurement of the Environment*. Little Rock: University of Arkansas at Little Rock.
- Campbell, D. T. (1963). Social attitudes and other acquired behavioral dispositions. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 6, pp. 94-172). New York: McGraw-Hill.
- Campbell, F. A., Goldstein, S., Schaefer, E. S., and Ramey, C. T. (1991). Parental beliefs and values related to family risk, educational intervention, and child academic competence. *Early Childhood Research Quarterly*, 6, 167-182.
- Carpenter, P. G., and Fleishman, J. A. (1987). Linking intentions and behavior: Australian students' college plans and college attendance. *American Educational Research Journal*, 24, 79-105.
- Chiu, L. H. (1987). Child-rearing attitudes of Chinese, Chinese-American, and Anglo-American mothers. *International Journal of Psychology*, 22, 409-419.
- Chu, C. P. (1973). Parental attitudes in relation to young children's creativity. *Acta Psychologica Taiwanica*, 15, 10-24.
- Claeys, W., and DeBoeck, P. (1976). The influence of some parental characteristics on children's primary abilities and field independence: A study of adopted children. *Child Development*, 47, 842-845.
- Cross, H. J., and Kawash, G. F. (1968). A short form of PARI to assess authoritarian attitudes toward child rearing. *Psychological Reports*, 23, 91-98.
- Cutrona, C. E., and Troutman, B. R. (1986). Social support, infant temperament, and parenting self-efficacy: A mediational model of postpartum depression. *Child Development*, 57, 1507-1518.
- deMan, A., Balkou, S. T., and Vobecky, J. (1985). Factor analysis of a French-Canadian form of the parental attitude research instrument. *The Journal of Psychology*, 119, 225-230.
- Deming, B. A. (1964). *A study of the interaction between parental role and parental attitude and its relationship with behavior manifestations in preadolescent sons*. Unpublished Dissertation. Michigan State University.

- Dolan, L. (1983). The prediction of reading achievement and self-esteem from an index of home educational environment: A study of urban elementary students. *Measurement and valuation in Guidance*, 16, 86-94.
- Drews, E. M., and Teahan, J. E. (1957). Parental attitudes and academic achievement. *Journal of Clinical Psychology*, 13, 328-332.
- Duffield, B. N. (1988). *Belief systems as determinants of parenting*. Unpublished Dissertation. Georgia State University.
- Eagly, A. H., and Chaiken, S. (1993). *The psychology of attitudes*. New York: Harcourt Brace Jovanovich College Publishers.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Fishbein, M. A., and Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Gibaud-Wallston, J., and Wandersman, L. P. (1978). *Development and utility of the Parenting Sense of Competence Scale*. Paper presented at the meeting of the American Psychological Association, Toronto.
- Goodnow, J. J. (1988). Parents' ideas, actions and feelings: Models and methods for developmental and social psychology. *Child Development*, 59, 286-320.
- Goodnow, J. J., Cashmore, J., Cotton, S., and Knight, R. (1984). Mothers' developmental timetables in two cultural groups. *International Journal of Psychology*, 19, 193-205.
- Goodnow, J. J., and Collins, W. A. (1990). *Development according to parents: The nature, sources, and consequences of parents' ideas*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Grusec, J. E., Hastings, P., and Mommone, N. (1994). Parenting cognitions and relationship schemas. In J. G. Smetana (Ed.), *Beliefs about parenting: Origins and developmental implications* (pp. 5-19). San Francisco, CA: Jossey-Bass.
- Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1992). *Multivariate data analysis*. New York: Macmillan.

- Hamilton, M. A., and Hunter, J. E. (1992). *Confirmatory Factor Analysis*. Michigan State University.
- Hess, R. D., Kashiwagi, K., Azuma, H., Price, G. G., and Dickson, W. P. (1980). Maternal expectations for mastery of developmental tasks in Japan and the United States. *International Journal of Psychology*, 15, 259-271.
- Holden, G. W., and Coleman, S. D. (1992). The measurement of child rearing: Paradox and Promise. In J. M. A. M. Janssens, and J. R. M. Gerris (Eds.), *Child Rearing: Influence on prosocial and moral development* (pp. 7-30). Amsterdam: Swets and Zeitlinger.
- Holden, G. W., and Edwards, L. (1989). Parent attitudes toward child rearing: Instruments, issues, and implications. *Psychological Bulletin*, 106, 29-58.
- Humphries, T. W., and Bauman, E. (1980). Maternal child rearing attitudes associated with learning disabilities. *Journal of Learning Disabilities*, 13, 459-462.
- Hunter, John E., and Cohen, Stanley H. (1969). PACKAGE: A system of computer routines for the analysis of correlational data. *Educational and Psychological Measurement*, 29, 697-700.
- Hunter, John E., and Gerbing, David. W. (1982). Unidimensional measurement, second order factor analysis and causal models. In B. W. Staw and L. L. Cummings (Eds.), *Research in Organizational Behavior*, Vol. 4. Greenwich, CT: JAI Press.
- Hunter, J. E., and Hamilton, M. A. (1992). *PATH*. Michigan State University.
- Johnston, C., and Mash, E. J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology*, 18, 167-175.
- Kohn, M. L. (1969). *Class and conformity: A study in values*. Homewood, IL: Dorsey.
- Kerlinger, F. N. (1973). *Foundations of behavioral research*. New York: Holt, Rinehart, and Winston.
- Kruger, S. F., and Kroes, W. H. (1972). Child-rearing attitudes of Chinese, Jewish, and Protestant mothers. *The Journal of Social Psychology*, 86, 205-210.

- Lawton, J. T., Coleman, M., Boger, R., Pease, D., Galeja, I., Poresky, R., and Looney, E. (1983). Q-Sort Assessment of Parent's Beliefs about Parenting in Six Midwestern States. *Infant and Mental Health Journal*, 4.
- Lee, S., Ichikawa, V., and Stevenson, H. W. (1987). Beliefs and achievement in mathematics and reading: A cross-national study of Chinese, Japanese, and American children and their mothers. *Advances in Motivation and Achievement: Advancing Motivation*, 5, 149-179.
- Lightfoot, C., and Valsiner, J. (1992). Parental belief systems under the influence: Social guidance of the construction of personal cultures. In I. E. Sigel, A. V. McGillicuddy-DeLisi, and J. J. Goodnow (Eds.), *Parental belief systems: The psychological consequences for children* (pp. 393-414). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Liska, A. E. (1984). A critical examination of the causal structure of the Fishbein/Ajzen attitude-behavior model. *Social Psychology Quarterly*, 47, 61-74.
- Luster, T., and Dubow, E. (1990). Predictors of the quality of the home environment adolescent mothers provide for their school-age children. *Journal of Youth and Adolescence*, 19, 475-494.
- Luster, T., and Rhoades, K. (1989). The relation between child-rearing beliefs and the home environment in a sample of adolescent mothers. *Family Relations*, 38, 317-322.
- Lydiat, M. (1974). Parental attitudes and the moral development of children. *Journal of Moral Education*, 3, 271-281.
- Maccoby, E. E. (1984). Middle childhood in the context of the family. In W. A. Collins (Ed.), *Development during middle childhood: The years from six to twelve* (pp. 184-239). Washington, D.C.: National Academy Press.
- McGillicuddy-De Lisi, A. V. (1985). The relationship between parental beliefs and children's cognitive level. In I. E. Sigel (Ed.) *Parental belief systems : The psychological consequences for children* (pp. 7-24). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Miller, S. A. (1988). Parents' beliefs about their children's cognitive development. *Child Development*, 59, 259-285.

- Murphy, D. A. (1991). *A multi-method investigation of parental beliefs and their association with observed behavior*. Unpublished Dissertation. University of Michigan.
- Murphy, D. A. (1992). Constructing the child: Relations between parents' beliefs and child outcomes. *Developmental Review*, 12, 199-232.
- Nichols, R. C. (1962). A factor analysis of parental attitudes of fathers. *Child Development*, 33, 791-802.
- Ogbu, J. (1981). Origins of human competence: A cultural-ecological perspective. *Child Development*, 52, 413-429.
- Okagaki, L., and Sternberg, R. J. (1991). Cultural and parental influences on cognitive development. In L. Okagaki, and R. J. Sternberg (Eds.), *Directors of Development: Influences on the development of children's thinking* (pp. 101-120). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Okagaki, L., and Sternberg, R. J. (1993). Parental beliefs and children's school performance. *Child Development*, 64, 36-56.
- Palacios, J., Gonzalez, M., and Moreno, M. (1992). Stimulating child in the zone of proximal development: The role of parents' ideas. In I. E. Sigel, A. V. McGillicuddy-DeLisi, and J. J. Goodnow (Eds.), *Parental belief systems: The psychological consequences for children* (pp. 71-94). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Rodrigue, J. R., Geffken, G. R., Clark, J. E., Hunt, F., and Fishel, P. (1994). Parenting satisfaction and efficacy among caregivers of children with diabetes. *Children's Health Care*, 23, 181-191.
- Sameroff, A. J. (1987). The social context of development. In N. Eisenberg (Ed.), *Contemporary topics in developmental psychology* (pp. 273-291). New York: Wiley.
- Sameroff, A. J., and Feil, L. A. (1985). Parental concepts of development. In I. E. Sigel (Ed.) *Parental belief systems: The psychological consequences for children* (pp. 83-105). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schaefer, E. S., and Bell, R. Q. (1958). Development of a parental attitude research instrument. *Child Development*, 29, 339-361.

- Sears, R., Maccoby, E., and Levin, H. (1957). *Patterns of child rearing*. New York: Harper.
- Seginer, R. (1983). Parents' educational expectations and children's academic achievements: A literature review. *Merrill-Palmer Quarterly*, 29, 1-23.
- Sigel, I. E. (1985). A conceptual analysis of beliefs. In I. E. Sigel (Ed.) *Parental belief systems: The psychological consequences for children* (pp. 347-371). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sigel, I. E. (1986). Reflections of the belief-behavior connection: Lessons learned from a research program on parental belief systems and teaching strategies. In R. D. Ashmore and D. M. Brodzinsky (Eds.), *Thinking about the family: Views of parents and children*, (pp. 35-66). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sims, L. S. (1971). *Nutritional status of preschool children in relation to selected factors characterizing the family environment- An ecological approach*. Unpublished Dissertation. Michigan State University.
- Sims, L. S., and Paolucci, B. (1975). An empirical reexamination of the parent attitude research instrument (PARI). *Journal of Marriage and The Family*, 37, 724-732.
- Smetana, J. G. (1994). Parenting styles and beliefs about parental authority. In J. G. Smetana (Ed.), *Beliefs about parenting: Origins and developmental implications* (pp. 21-36). San Francisco, CA: Jossey-Bass.
- Steinberg, L., Dornbusch, S. M., and Brown, B. B. (1992). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, 47, 723-729.
- Stevenson, H. W., and Lee, S. (1990). Contexts of achievement. *Monographs of the Society for Research in Child Development*, 55(1-2, Serial No. 221).
- Stevenson, H. W., Lee, S., and Stigler, J. W. (1986). Mathematics achievement of Chinese, Japanese, and American children. *Science*, 231, 693-699.
- Tolor, A., and Jalowiec, J. E. (1968). Body boundary, parental attitudes, and internal-external expectancy. *Journal of Consulting and Clinical Psychology*, 32, 206-209.

- Touliatos, J., Perlmutter, B. F., and Straus, M. A. (1990). *Handbook of family measurement techniques*. Newbury Park, CA: Sage.
- Triandis, H. C. (1994). *Culture and social behavior*. New York: McGraw-Hill.
- Triandis, H. C. (1995). *Individualism and Collectivism*. Boulder, Colorado: Westview Press.
- Tuss, P., Zimmer, J., and Ho, H. (1995). Causal attributions of underachieving fourth-grade students in China, Japan, and the United States. *Journal of Cross-Cultural Psychology*, 26, 408-425.
- Yao, E. L. (1985). A comparison of family characteristics of Asian-American and Anglo-American High Achievers. *International Journal of Comparative Sociology*, 26, 198-208.
- Yater, A., Olivier, K., and Barclay, A. (1968). Factor analytic study of PARI responses of mothers of head start children. *Psychological Reports*, 22, 383-388.
- Youniss, J. (1994). Rearing children for society. In J. G. Smetana (Ed.), *Beliefs about parenting: Origins and developmental implications* (pp. 37-50). San Francisco, CA: Jossey-Bass.
- Zajonc, R. B. (1984). On the primacy of affect. *American Psychologist*, 39, 117-123.
- Zuckerman, M. (1959). Reversed scales to control acquiescence response set in the parental attitude research instrument. *Child Development*, 30, 523-532.
- Zuckerman, M., Ribback, B. B., Monashkin, I., and Norton, Jr., J. A. (1958). Normative data and factor analysis on the parental attitude research instrument. *Journal of Consulting Psychology*, 22, 165-171.

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