Socialization, Attribution, and Academic Achievement of Filipino Adolescents in Canada and the United States

by

Lilia P. Salazar

A thesis
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in
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SOCIALIZATION, ATTRIBUTION, AND ACADEMIC ACHIEVMENT OF FILIPINO ADOLESCENTS IN CANADA AND THE UNITED STATES

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LILIA P. SALAZAR

A Thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

Weiner's (1986) recent attributional model of achievement was found most appropriate for the present study but was shown inadequate because it was not developed to account for ethnic-related differences on achievement. More specifically, the conceptual model of achievement among Asian adolescents in North America formulated by Schludermann & Schludermann (1980) was employed to examine the culture-related variables of academic achievement. Thus, this study had a twofold goal: examining the predictors of academic achievement, and as a result, developing a path-analytic model of academic achievement in Filipino adolescents.

The following independent variables of academic achievement were investigated: (1) Attribution of success or failure in the school (Watkins and Astilla's (1984); (2) General Socialization (Children's Report of Parental Behavior Inventory-30 or CRPBI-30, Schludermann & Schludermann (1988); (3) Academic Socialization i.e., Authoritarian, Authoritative, and Permissive Styles (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987); and, (4) Demographic variables. Academic achievement was operationalized as the students' Grade Point Average (GPA).

Four hundred students from Winnipeg and 535 adolescents from San Francisco, ages 11-19, participated in this study. The data were collected from community organizations in Winnipeg from February to August, 1989; and from junior- and senior-high schools in San Francisco from September 1990 to April 1991.

The factor analyses validated the CRPBI-30's dimensions of Acceptance, Psychological Control, and Firm Control and, yielded three factors of Attribution i.e., Internal Causes, Task Difficulty, and Chance. Descriptive statistics, correlation, analysis of variance, and stepwise regression procedure were conducted to determine the significant predictors of GPA. Path analysis was further employed to examine the ordering of the relationships between these significant variables and GPA, and the causal direction of these relationships.

The identified path-analytic model of GPA in the San Francisco sample revealed three significant predictors of high GPA: Student Involvement, Internal Attribution and Maternal Firm Control. Authoritarian Socialization is associated with low grades. Some variables have indirect positive effects on GPA: Importance of Family Reputation, Parental Involvement, Parents' Education, and Authoritative Socialization. Permissive Socialization is indirectly related to low grades. The proposed path-analytic model of academic achievement in Filipino adolescents in Canada and the United States confirms the importance of culture-related variables in achievement.

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INTRODUCTION

The strong demographic trend towards increasing cultural diversity among North American children, adolescents and families poses a serious challenge to educators and social scientists. The majority of educators in the United States and Canada were not trained to understand and deal with non-European children and adolescents, whose behaviors in the classrooms and outside the school may puzzle the teachers (Caplan, Choy & Whitmore, 1992; Yao, 1979). Social scientists find that their earlier assumptions of behavior models which worked well with the children and adolescents of earlier European immigrants seem unable to explain the behaviors of the Asian immigrant children and adolescents (Spencer, 1990). In school situations, developmental psychologists are faced with the challenge to discover and empirically demonstrate the relationships among the social-cultural variables of the recently-immigrated ethnic groups and their children or adolescents' school behavior, attitudes and achievements (McLoyd, 1990; Slaughter-Defoe, Nakagawa, Takanishi & Johnson, 1990; Spencer, 1990).

This study deals with the academic achievement of Filipino high-school students in Canada and the United States. Understanding the factors related to the academic achievement of Filipino adolescents is of special interest because Filipinos are one of the fastest growing immigrant groups impacting the school systems in the United States and Canada (e.g., Dornbusch,

Prescott & Ritter, 1987; Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987). In the United States, Filipino children and adults total 1,407,000 and are the second largest Asian immigrant group after the Chinese (United States Bureau of the Census, 1992, p. 21). In Canada, Filipinos also represent a substantial portion of the immigrants, numbering 157,250 in 1991 (Statistics Canada, 1993, p. 20).

In addition, Filipino immigration to Canada is a very recent one, having started only in the sixties due to Canada's earlier immigration policy that was characterized by an expressed preference for White immigrants (Hawkins, 1974). The cultural characteristics of immigrant students have to be considered in understanding their learning process (e.g., Caplan, Choy & Whitmore, 1992; Yao, 1979, 1985).

Regarding parenting and achievement, for instance, Filipino-Canadians may differ largely from European-Canadians who have been in Canada for generations. However, despite the strong need to study the Filipino immigrants because of their recent immigration to Canada and their large number in the United States, there has been very little research that investigated the relationship between family variables and adolescent achievement (e.g., Chen, 1990; Slaughter-Defoe, Nakagawa, Takanishi & Johnson, 1990; Stymeist, Salazar & Spafford, 1990).

One cannot assume that the same factors foster academic achievement in European-American/Canadian and Asian-American/Canadian students, or even Asian-American/Canadian

students of different cultural backgrounds (e.g., Schludermann & Schludermann, 1977). Asians bring a different combination of culture from the European immigrants and that includes their language, customs, family systems and value orientation. Moreover, although there are differences among the Asians themselves, most researchers tend to lump "Asians" into one category.

Therefore, studying Filipinos, Vietnamese, Chinese, Japanese, or South Asians as an undifferentiated Asian group may tend to confound the results, and consequently the understanding of the process variable that may operate in different Asian ethnic groups (Schludermann & Schludermann, 1977; Slaughter-Defoe, Nakagawa, Takanishi & Johnson, 1990). In contrast to most earlier studies of "Asian-American" students, it is desirable to study initially students from a single ethnic group (i.e., Filipinos) and then explore to what extent the results of this study are generalizable to other Asian-American/Canadian students.

Ethnic research requires that the investigators have a sufficient knowledge and understanding of that ethnic group's social-cultural background, cultural traits and values (Slaughter-Defoe, Nakagawa, Takanishi & Johnson, 1990; Spencer, 1990). The present researcher is a Filipino immigrant who has a knowledge of the Philippine culture, the experience of living both in the United States and Canada, and the bilingual skill (i.e., Tagalog) to conduct research among Filipino-

Americans/Canadians. Thus, the choice to study the Filipino group in particular was influenced by the researcher's interest and background, aside from the significant reasons cited earlier.

The present study is an attempt to examine the factors related to academic achievement among Filipino adolescents in Winnipeg and the San Francisco Bay Area. This is a developmental study of adolescents (13-18 years of age) in a specific ethnic group, i.e., the Filipinos. Although ethnic "differences" do not necessarily mean "deficiencies" (e.g. Cole & Means, 1981; Washington & McLoyd, 1982), a lack of knowledge of these differences may influence one's interaction with ethnic students.

It is hoped that the results of this study may help educators dealing with Filipino adolescents gain a better understanding of this ethnic group and eventually facilitate more effective learning among the Filipino students. It may also assist teachers and education-policy makers in helping other immigrant groups by considering how the proposed model of achievement may apply to those other minority adolescent groups. Research on the academic achievement of minority adolescents may affect the whole of society by sensitizing teachers to the challenges of teaching a culturally-diverse student population.

There are eight chapters in the present study. Chapter 1 discusses five relevant models of achievement with a comparison of their similarities and differences. It also presents the historical development of Weiner's theory of achievement motivation and the rationale for its choice as the study's

theoretical framework.

Chapter 2 summarizes the empirical studies on adolescent academic achievement. Five variables of achievement are discussed: causal attribution, general parenting practices, academic socialization, ethnicity, and gender.

Chapter 3 provides background information on the Filipino community in the United States and Canada. It discusses the history of Filipino immigration to North America, the values inculcated in Filipino families, and empirical studies on Filipino adolescent achievement.

Chapter 4 presents the objectives of the present study based on the conceptual model of achievement among Asian adolescents in North America as formulated by Schludermann & Schludermann (1980). It also discusses the operational definitions of the variables, the hypotheses, and the proposed path-analytic model.

Chapter 5 is the Method section. The subjects, instruments and procedure of this study are discussed in this section.

Chapter 6 gives the details of the results of this study. These results are summarized in four major sections.

Chapter 7 interprets the results of the present study. The results were interpreted in view of the literature review presented in Chapters 1-3 and the context of the cultural characteristics of the participants of this research.

Chapter 8 concludes this study. It summarizes the major findings and their implications/ applications as well as the study's limitations.

CHAPTER 1: THEORETICAL BACKGROUND

1.1. Theoretical Models

Achievement motivation and behavior can be explained through various models. For the purposes of this research, five relevant models will be presented below. Theoretical comparisons will be made and the rationale for the choice of the theoretical framework of the present study will then be discussed. The first two theories are developmental, i.e., those of Crandall, Katkovsky & Preston (1960) and Veroff (1969, 1975), whereas the last three theories are not developmental, i.e., those of Atkinson (1957, 1974), Rotter (1966) and Weiner (1986).

1.1.1. Achievement Motivation as a Multiplicative Function of Expectancy and Values (Crandall, Katkovsky and Preston, 1960)

Three criteria of achievement behavior are specified in this model as follows: (1) the inferred goal of the behavior, (2) the unique characteristic of the behavior involved, and (3) the nature of the situations in which the behavior occurred. On the basis of these criteria, Crandall, Katkovsky and Preston (1960) proposed a definition of achievement behavior as a behavior that is directed to attain approval or avoid disapproval (i.e., the goal) for competence of performance (i.e, the characteristic of the behavior) in situations where standards of excellence apply (i.e., the nature of the situation).

Three cognitive factors are considered useful and necessary in predicting achievement behavior (Crandall, Katkovsky & Preston, 1960). These include attainment value, achievement standards and achievement expectancy. Attainment value refers to the importance or value given by an individual to feedback received concerning his/her performance in a given achievement area. The higher the attainment value in a given achievement area, the more frequently one will choose participation in that area and the greater one's persistence will be. Some standard of excellence is used to evaluate competence of performance. Achievement standards may differ from one individual to another and have several parameters. One parameter that has received much attention is the height of standards or the level of competence needed to attain approval. More competent performance is needed for approval when an individual's minimal goals are high.

Other parameters of achievement standards include form, breadth, stability and source. There are various forms of achievement standards such as cardinal, nominal or ordinal scales. The breadth of standards refers to its specificity to classes of achievement areas or generalizability across such behaviors and areas. The stability of standards indicates the extent to which an individual's standards are prone to change due to other people's reactions or one's new experiences. Concerning source of standards, this may either be internal or external to the individual concerned.

The form, breadth, stability and source of achievement standards may vary from one individual to another. There have not been sufficient studies done on these paremeters to be able to determine their effects on achievement behavior. Future research must focus on these areas.

The third important construct is that of achievement expectancy. This pertains to an individual's expectations concerning the probable success of one's achievement efforts. This concept might be used in predicting specific achievement behaviors such as task persistence. More specifically, when one anticipates that efforts will lead to goal attainment, then task persistence is higher.

These three factors are related to achievement behavior. Using task persistence as a specific example of achievement behavior, the following predictions can be made:

(1) Attainment value is positively related to task persistence.

(2) Expectancy of success is positively associated with task persistence.

(3) Attainment value should increase the correlation of expectancy and task persistence. and,

(4) The height of children's achievement standards may have a curvilinear relationship with task persistence.

1.1.2. Achievement Motivation as a Function of Developmental Process (Veroff, 1969,1975)

According to this model, there are two kinds of achievement motivation: autonomous and social. Autonomous achievement is based on internalized standards; i.e., comparisons of the self with the self. Social achievement, on the other hand, concerns standards based on social comparison. This theory postulates that social achievement does not develop until the early school years. Veroff accounts for the formation of these motivations through three stages of development (Veroff, 1969; 1975). The three stages of development according to this model are as follows:

(1) Autonomous achievement stage: The achievement motive develops only once an individual has learned self awareness wherein self evaluation of what has been accomplished is attained. This awareness and its consequent self evaluation result from a certain mastery of the environment. This mastery, in turn, is acquired by exploring and coping with the environment.

Autonomous achievement begins in the second year of life when a child acquires linguistic capabilities. At this age, children can reflect on their actions and how these actions accomplish their intentions. In order for this stage to develop successfully, a child must gain a sense of effectiveness. Effectiveness can come from free exploration of the environment, proper use of linguisitic capacities, and challenging tasks

presented by the caretaker. Inadequate mastery at this stage will produce performance-related anxiety in the individual's future.

(2) Social comparison stage: At age 5 or 6, the child starts comparing his/her achievement with that of others. The social comparison stage develops at this time and has both informative and normative functions. The informative function allows the child to know his/her performance in comparison with others, thus, should enable him/her to relate meaningfully to them. The normative function gives information on the group standard.

In considering these two functions, the normative function must not overrule the informative function because it will disturb the autonomous achievement developed earlier. In order to develop a successful social comparison stage, the requirements include the following: some degree of autonomous competence, homogeneous social-reference groups, proper parental aspirations and appropriate pacing.

(3) Integration stage: This takes place after the social comparison stage. However, this is not a simple combination of autonomous and social achievement motivations. Instead, these motivations are separate and are used appropriately in various situations. In this stage, one finally acquires a mature orientation to achievement by accommodating one's standard in relation to the outside world.

1.1.3. Achievement Motivation as a Multiplicative Function of Motive (M), Expectancy (P) and Incentive (I) (Atkinson, 1957,1974):

In this model, achievement motivation is defined as a function of three factors, namely: Motive (M), Expectancy (P) and Incentive (I). Thus, Motivation= f(Motive x Expectancy x Incentive) (Atkinson, 1957, 1974).

Expectancy refers to the cognitive anticipation that a particular consequence will follow performance. Incentive is the attractiveness or unattractiveness of a specific goal in a situation. Motive represents one's disposition or capacity to strive for satisfaction for the attainment of a certain class of incentives (Atkinson, 1957). Motives are classified into two: achievement motive (Ms) and avoidance motive (Maf). Achievement motive is the disposition to approach success while avoidance motive is the disposition to avoid failure. The resulting motivation when both motivation to approach and motivation to avoid are aroused is the algebraic summation of approach and avoidance (Atkinson, 1957).

This model accounts for an individual's achievement-oriented tendency in terms of two factors: 1) task difficulty (probability of success--Ps, or probability of failure--Pf), and 2) the person's motivational disposition. One's motive to achieve success or to avoid failure is a relatively stable personality disposition (Atkinson, 1974).

According to this model, the incentive value of success (Is)

and the strength of expectancy or subjective probability of success (Ps) are inversely related. Based on this assumption, the model explains what kinds of tasks are chosen by individuals differing in their motivation to achieve and motivation to avoid failure. When the achievement motive is stronger than the motive to avoid failure, the individual is most likely to approach a task of intermediate difficulty where Ps equals .50. Moderate risk is taken in this situation; thus, individuals maximize their own anxiety about failure.

On the other hand, when the motive to avoid failure is stronger than the achievement motive (Mf > Ms), the individual would choose either the easiest (Ps = .90) or the most difficult task (Ps = .10). The easiest alternatives would likely result in success and the most difficult tasks offer virtually no chance for success, thus, both tasks minimize one's anxiety about failure. However, regardless of one's motive to achieve/to avoid failure, the strength of motivation to perform a task should be greatest when Ps is .50, when no alternatives are offered, and when the individual is constrained, i.e., no opportunity for the individual to choose the task (Atkinson, 1957).

This model also accounts for the dynamics of achievement orientation (Atkinson, 1974). It is assumed that when one succeeds in an activity, the individual's expectancy of success increases; further, when he/she fails, the expectancy of success at that task and similar tasks is decreased.

Atkinson asserts that achievement motivation develops

according to one's initial success or failure in a given task . This is usually set at p = .50. With success, the probability of success increases while that of failure decreases. When this continues to occur, the individual's motivation to achieve the old task decreases and the motivation to achieve an objectively more difficult task develops.

In short, when motive to avoid failure is dominant in an individual, the person would inhibit all achievement-oriented activity. The person will not choose any activity given a choice between alternatives unless there are other extrinsic positive incentives to undertake these activities which overcome one's resistance (Atkinson, 1974). These include seeking of social approval, compliance with an authority or strong excitatory approaches exerted by other sources.

1.1.4. Achievement Motivation as a Function of Locus of Control (Rotter, 1966):

This model is based on the social-learning theory and its conceptualization of the nature and effects of reinforcement (Rotter,1966). According to the social-learning theory, reinforcement strengthens an expectancy that a specific behavior or event will be followed by that reinforcement in the future. Generally, when the reinforcement is perceived by an individual as noncontingent on his/her behavior, the expectancy for its occurrence or nonoccurrence will not be as strong as when it is seen as contingent. Expectancies generalize from a

specific situation to a series of similar situations. These expectancies greatly affect an individual's behavior (Rotter,1966).

Thus, two factors determine behavior in general and achievement behavior in particular. These are: (1) the value of the reinforcement, and (2) one's perception of a causal relationship between his/her own behavior and the reinforcement. Individuals who believe that their behavior or characteristic can affect reinforcement have an internal locus of control while those who believe that luck, chance or fate affect reinforcement have an external locus of control.

Individuals vary in degree of internality and externality. Those who are more externally-oriented tend to be passive, alienated, incompetent and feel unable to control their destiny, and are likely to use luck as a defense when they fail. Internals, on the other hand, believe that they can control their destiny. They try to improve their environmental condition, place more importance on skill or achievement reinforcement, as well as their ability, and resist subtle attempts by others to influence them.

With regard to achievement motivation, Rotter postulated that high achievers tend to have an internal locus of control. They have some belief in their own ability or skill; thus, they are more concerned about their abilities, failures and successes. However, the relationship between internal locus of control and achievement is probably not linear. That is, a person high on

achievement motivation may not be equally high on internality.

Also, there may be internals who have a low achievement motivation. This possibility may be due to the fact that because "once a person has established a locus of control belief, the effects of reinforcement will vary depending upon what relationship he assigns to the behavior-reinforcement sequence" (Rotter, 1966, p.4) and also implies that individuals choose aspects of the behavior to be repeated or strengthened depending on the value that they wish to give the task or area of interest.

1.1.5. Achievement as a Function of the Stability of Attribution (Weiner, 1986):

This theory assumes that individuals search for causal understanding of success or failure in achievement tasks. Some of these causes include ability, immediate and long-term effort, task characteristics, intrinsic motivation, teacher's competence, mood and luck. Ability and effort attributions are the most dominant among these causes (Weiner, 1986).

Three dimensions of causality have been identified with some certainty. These are: locus, stability and controllability. Two other possible dimensions are globality and intentionality.

Locus refers to the location of a cause, i.e., whether it is internal or external to the person. Stability refers to the temporal nature of the cause. A cause may be relatively enduring or it may vary across situations or times. Ability and task difficulty are considered stable causes of achievement, while

effort and luck are unstable causes.

According to Weiner (1986), the stability of a cause also influences the expectancy of success. In general, if outcomes are ascribed to stable causes, the same outcomes will likely be repeated in the future with greater expectation for success, than those outcomes ascribed to unstable causes.

Controllability refers to the degree of volitional influence that can be exerted over a cause. For example, ability and luck are usually not subject to volitional influence and are considered uncontrollable. On the other hand, effort expenditure and performance strategy are perceived as controllable.

Two other possible causal dimensions are intentionality and globality. The contrast between effort and strategy refers to intentionality. That is, success might be due to hard work or proper strategy and failure due to insufficient effort or poor strategy (Weiner, 1979). Globality is the specificity or generality of a cause. Some causes are specific to a situation while others generalize across settings (Abrahamson, Seligman & Teasdale, 1978). However, these dimensions need further investigation.

Aside from the cognitive effects on the individual, the various dimensions of causality also influence an individual's affective reactions. Internal causes (e.g., ability, effort) elicit greater self-esteem for success and lower self-esteem for failure than do external causes (e.g., luck, task difficulty). Controllability influences emotions about oneself and toward

others. For instance, when failure is perceived as controllable by others such as that caused by teacher's bias, anger is generated toward others. Generally, controllable causes of personal failure generate feelings of guilt, whereas uncontrollable causes promote feelings of shame.

Weiner's model finally moves toward behavioral consequences. These behaviors are measured by expectancy and affect. Achievement behavior is measured in terms of one's persistence, latency and intensity at a particular task.

1.1.6. Summary of the Five Models of Achievement

The five models of achievement motivation presented in this study and their brief descriptions are as follows:

(1) Crandall, Katskovsky & Preston's (1960) theory of achievement motivation as a multiplicative function of expectancy and values: In this theory, achievement behavior is predicted by three cognitive factors, namely: attainment value, i.e, the importance given by an individual to feedback received concerning his/her performance in a given achievement area; achievement standards, i.e, a standard of excellence used to evaluate competence of performance; and, achievement expectancy, i.e., an individual's expectations concerning the probable success of one's achievement efforts.

(2) Veroff's (1969, 1975) theory of achievement motivation as a function of developmental process: The two kinds of achievement are autonomous (based on internalized standards) and

social (based on social comparison). Social achievement develops in the early school years through the autonomous achievement stage, the social comparison stage, and the integration stage.

(3) Atkinson's (1957, 1974) theory of achievement motivation as a multiplicative function of motive, expectancy and incentive: Achievement motivation is defined as a function of three factors: motive, i.e., one's disposition or capacity to strive for satisfaction for the attainment of a certain class of incentives; expectancy, i.e., the cognitive anticipation that a particular consequence follows performance; and, incentive, i.e., the attractiveness or unattractiveness of a specific goal in a situation.

(4) Rotter's (1966) theory of achievement motivation as a function of locus of control: The two factors that determine achievement behavior are the value of reinforcement and one's perception of a causal relationship between one's own behavior and the reinforcement. Individuals who believe that their behavior or characteristic can affect reinforcement have an internal locus of control. High achievers tend to have an internal locus of control.

(5) Weiner's (1986) theory of achievement as a function of the stability of attribution: Weiner identified three dimensions of causality,: locus, stability, and controllability. Locus refers to the location of a cause; stability refers to the temporal nature of the cause; and controllability refers to the degree of volitional influence that can be exerted over a cause.

Those who attribute their success to stable causes tend to be high achievers.

2.2. Theoretical Comparisons

The first two theories by Crandall, Katkovsky & Preston (1960) and Veroff (1969, 1975) were found inappropriate for the purposes of this research. The developmental aspect of achievement will be examined in this study, but not through the model proposed by Veroff (1969, 1975). Because the design of the present study is not longitudinal, Veroff's theory does not fit the present research. The influence of developmental process will be investigated instead in terms of the effect of socialization practices on achievement motivation of adolescents.

The model of achievement as a function of expectancy and values proposed by Crandall, Katkovsky and Preston (1960) appears to be rather limited for an adequate analysis of achievement motivation. This model is not considered for the present study because the concept of values can actually be incorporated into Atkinson's conceptualization of motive and incentive. Crandall and colleagues (1960) define value as the importance given by an individual to feedback received concerning his/her performance in a given achievement area. This affects one's achievement choice behavior and task persistence.

On the other hand, according to Atkinson (1957, 1974) incentive is the attractiveness or unattractiveness of a specific goal in a situation and motive in one's disposition or capacity

to strive for the attainment of a certain class of incentives. Value, then, according to Crandall et al.'s framework can be conceptualized as a combination of motive and incentive.

The three theories of Atkinson (1957, 1974), Rotter (1966) and Weiner (1986) were then considered for the theoretical framework of this study. Atkinson's theory and Rotter's theory were compared with Weiner's theory. The following section will compare and contrast these theories and will provide the rationale for choosing Weiner's theory as the framework of this study.

1.2.1. Atkinson's theory versus Weiner's theory

Atkinson's theory of achievement motivation has been largely used in explaining achievement motivation and behavior. This model, however, has some limitations in addressing issues related to achievement. More specifically, the evidence supporting Atkinson's theory can be more appropriately explained by an attributional approach, that is, in terms of the effects of causal attribution on affect and expectancy.

Thus, Atkinson's concepts can be understood more clearly by incorporating them into an attributional framework. The experimental evidence supporting Atkinson's theory can be categorized into four groups: (1) free choice, (2) persistence of behavior in progress, (3) intensity of performance, and, (4) forced choice (Weiner, 1972). An attributional explanation can account for these evidences.

With respect to free-choice behavior (i.e., those not confined within achievement-related alternatives), attributionists suggest that individuals high in resultant achievement motivation are more likely to undertake achievement-related activities than individuals low in resultant achievement motivation. According to attributionists, individuals with high achievement motivation have a greater positive affect for success and also maintain a high expectancy of success following failure. Moreover, individuals high in achievement needs tend to persist in the face of failure because they ascribe failure to a lack of effort. As a result, they continue striving for the goal because their expectancy of success following failure remains high.

In contrast, individuals with low achievement needs attribute failure to low ability; thus, the expectancy of success decreases and achievement activity stops. Greater intensity of performance is also displayed by individuals high in achievement needs than those low in achievement needs (i.e., they work harder).

Furthermore, maximum intensity of performance is shown in tasks of intermediate difficulty (Atkinson, 1957; 1974). An alternate explanation is provided by attributionists. Individuals with high achievement needs are the only ones who believe in a perceived relationship between effort and outcome. Thus, they work harder because they see effort as instrumental to attaining success.

Concerning task difficulty and intensity of performance, perceiving effort as a determinant of achievement outcome influences one's behavior. Because individuals with high achievement needs perceive the relationship between effort and achievement, they find effort to be most important at tasks of intermediate difficulty. Effort may be unnecessary for success in easy tasks and a waste of energy in very difficult tasks.

Moreover, in forced-choice situations, individuals with high achievement needs choose tasks of intermediate difficulty more often than individuals with low achievement needs. When the former choose tasks of intermediate difficulty over time, internal attributions result.

1.2.2. Rotter's theory versus Weiner's theory

There are various differences between social learning theory and attribution theory. However, an important phenomenon in achievement motivation shared by both theories deals with expectancy shifts following attainment or nonattainment of a goal. Research on expectancy change include level of aspiration, expectancy change at chance tasks, and resistance to extinction as a function of locus of control.

In the area of aspiration level, the findings demonstrate that aspiration level increases after goal attainment (success) and decreases, if a prior aspiration was not met (failure). This pattern is referred to as typical aspiration shifts. According to aspiration theorists, aspiration level is determined partly by

the subjective expectancy of success, i.e., the higher the expectancy, the higher will be the aspiration level (Atkinson, 1964; Festinger, 1942; Lewin et al., 1944; Rotter, 1954).

Substituting expectancy change for aspiration level, it can be generalized that in skill-related situations, increases in expectancy follow success whereas decreases in expectancy follow failure. The case is different, however, in games of chance. A "gambler's fallacy" is often observed in games of chance where a loss is expected after winning and a win is anticipated after losing, even though outcomes are objectively independent (Cohen & Hansel, 1956). A related concept is the "negative recency effect" as shown in the increased expectancy of a "heads" after appearance of a "tails" on a coin toss (Lepley, 1963). Atypical shifts are then more observable in games of chance than typical shifts.

The social-learning theorists tried to incorporate these observations of expectancy shifts in skilled versus chance tasks. Perceptions of skill and chance perceptions in identical situations were manipulated in experiments they conducted. The results showed greater and more typical expectancy shifts in skill conditions while atypical shifts were observed in chance conditions (e.g., Phares, 1957).

Rotter and his colleagues (1962) developed the locus-of-control-concept to explain these data. They suggested that an internal locus of control accounts for typical shifts in skill condition, whereas an external locus of control produces atypical

shifts in chance conditions.

Attributionists, however, challenge this position. Although they acknowledge that social-learning theorists are correct in explaining expectancy shifts in terms of causal constructs, attributionists believe that it is the stability, and not the locus of cause, that accounts for expectancy and expectancy change.

The attributional analysis of expectancy shifts is consistent with the method used by social-learning theorists where skill and luck conditions are compared. Skill or ability is considered as an internal, stable cause while luck or chance is an external, unstable cause. Two dimensions of causality are linked to each other - locus and stability. Hence, it is necessary to separate these two dimensions of causality and relate them to expectancy change.

Empirical evidence for stability as the dimension associated with expectancy change was provided by Weiner, Nierenberg and Goldstein (1976). In this study, Weiner and his colleagues also summarized past research supporting the attributionists' contention such as those by Fontaine (1974), McMahan (1973),

Meyer (1973), Rosenbaum (1972) and Valle (1974) made a direct comparison of the social-learning and attribution approaches. The subjects consisted of 126 male undergraduate students. The task was a block design test on the Weschler Adult Intelligence Scales (WAIS). This was chosen because it was sufficiently ambiguous in terms of determinants of performance,

its outcome was under experimental control, and, the task was important to the participants.

The subjects were randomly assigned to one of six conditions (0,1,2,3,4, or 5 successes) with 21 subjects in each group. Baseline expectancy data was obtained by asking a group of 21 subjects their expectancy of success prior to any task performance. For the other five conditions, the expectancy of future success and attributions for the prior outcome were determined following the achievement tests.

To assess causal ascriptions, subjects were asked to mark four rating scales that were identical with respect to either the stability or the locus-of-control dimensions but which differed along the remaining dimension. Judgments were made using the following responses: "always good" and "tried hard" (both internal locus of control but differed in stability - ability is stable while effort is unstable); "lucky" and "tried hard" (unstable causes differing in locus of control); "these tasks are always easy" and "lucky" (external causes differing in stability); and, "always good" and "always easy" (stable causes differing in locus of control). These separations made it possible to directly test the locus-of-control versus stability hypotheses. Scoring was done by adding the two ratings for each causal dimension. After this was done, within each of the success conditions, the subjects were classified as either high (above the median) or low (below the median) in perceived stability of causal judgment and perceived locus of causality of

the outcome. The results confirmed the prediction that expectancy of success increases with the number of prior successes. The data showed that the increase in expectancy of future success is directly associated with the perceived stability of the cause of the prior outcome. That is, high stability is linked with higher expectancies than is low stability, particularly on the early trials. In contrast, perceptions of the locus of causality are insignificantly related to stated expectancies of success. The results support the attribution theory and contradict the social learning approach.

1.2.3. Summary of the Theoretical Comparisons

Atkinson's (1956, 1974) theory of achievement motivation is supported by experimental evidence in four categories, namely: free choice, persistence of behavior in progress, intensity of performance, and forced choice. However, Atkinson's model is limited in its explanation of these issues and the evidence supporting Atkinson's theory can be more appropriately explained by an attributional approach. More specifically, this concerns the effects of causal attribution on affect and expectancy.

According to Rotter's (1966) theory, internal locus of control accounts for typical shifts in skill conditions whereas external locus of control produces atypical shifts in chance conditions. Attributionists accept that the social learning theorists are correct in explaining expectancy shifts in terms of causal constructs but challenge their position that it is locus

of control, not stability, that accounts for expectancy and expectancy change. Attributionists state that the two dimensions of causality, i.e., locus and stability are linked to each other and need to be separated as two dimensions of causality in relation to expectancy change.

Weiner's (1986) theory of achievement motivation appears to be more comprehensive than Atkinson's and Rotter's theories in that it accounts for several concepts in both theories that have not been adequately accounted for. Atkinson demonstrates mainly what kinds of tasks individuals choose depending on their motivation to achieve and motivation to avoid failure whereas Weiner accounts for the person's reasons for these choices. Also, Rotter considers only one dimension of causal attribution, i.e, locus or source of control whereas Weiner identifies three possible dimensions: locus, stability and controllability.

Therefore, Weiner's theory appeared to be more comprehensive in its explanation of achievement behavior as it provides both the reasons for a person's choice of achievement tasks and why they succeed or fail in view of three dimensions of causal attributions. A more detailed discussion of Weiner's theory will be presented in the following section as Weiner's theory has been found to be the most appropriate theoretical framework for the present study.

1.3. The Theoretical Framework of the Present Study

Weiner's (1986) recent theory of achievement will be discussed in this section by tracing its historical development before focusing on its present concepts. The historical approach will be done to see the overall context of the development of Weiner's recent attribution theory of achievement from other attribution theories.

The historical development starts with Heider's naive psychology and its extensions. Then two other earlier theories by Jones and Davis (1965) and Kelley (1972) will be presented. The last part will focus on the assumptions of Weiner's theory as well as its limitations.

Attribution theorists deal with understanding naive perceptions of the causes of an event. The attribution process is conceptualized as one in which a naive individual first observes an event, then later forms cognitions as to the cause of the event. Causal attributions made about the event will affect the reactions of the individual to that event (Frieze & Bar-Tal, 1979). Heider (1958) started attribution theory. Davis & Jones (1965), Kelley (1972) and Weiner (1986) expounded on Heider's work. These will be presented below.

1.3.1. Heider's (1958) Naive Psychology

Fritz Heider is generally acclaimed as the founding father of attribution theory (Heider, 1958). His conceptualization of naive psychology was the basis for the revisions and extensions

of attribution theories, including Weiner's theory on attribution of success and failure.

Heider is viewed by most social psychologists as the father of the attributional approach. He uses unformulated or half-formulated knowledge of interpersonal relations expressed in everyday or common sense language and experience. The layman's phenomenology is the basis of his analysis and is called common-sense or naive psychology (Harvey, Ickes & Kidd, 1976).

In order to systematically conceptualize common-sense behavior, he also draws upon knowledge and insights of scientific investigation and theory. Furthermore, Heider also believes that language is an essential conceptual tool in naive psychology. He constructs a language that represents interpersonal relations, i.e., he discovers the basic concepts of common sense psychology by analyzing simple expressions to bring out essential meanings. This is referred to as symbolic language. This process can be utilized in both word analysis and situation analysis.

The underlying concepts of naive psychology include the concepts of subjective environment, perceiving, suffering, experiencing or being affected by, causing, can, trying, wanting, sentiments, belonging, ought, and may. In summary, in naive psychology "people have an awareness of their surroundings and the events in it (the life space), they attain this awareness through perception and other processes, they are affected by their personal and impersonal environment, they cause changes in the environment, they are able to (can) and try to cause these

changes, they have wishes (want) and sentiments, they stand in unit relations to other entities (belonging), and they are accountable according to certain standards (ought)" (Heider, 1958, p.17).

Heider (1958) formulated the perceived determinants of action according to Lewinian statement that behavior is a function of the person and the environment : B = f(P,E). The difference lies, however, on Heider's reference to the perceived causes of behavior and not to the determinants of force actually acting upon the person or influencing an outcome. According to Heider's analysis (1944, 1958), an outcome is an additive function of the effective environmental force and the effective personal force. Personal force, in turn, is a multiplicative function of power and motivation. These relationships are represented in the following formulas:

Effect= (Environmental Force + Personal Force) or

Effect= (Environmental Force + (Power x Motivation)).

Power refers primarily to one's ability, although other characteristics such as temperament may affect it. Motivation is the person's intention (i.e., what one is trying to do) and exertion (how hard one is trying to do something).

There are three things that can possibly result from the additive relationship between environmental and personal forces: (1) either force can produce the same outcome, even if one of the forces was absent; (2) the environmental force can supplement the personal force towards the same outcome; or, (3) the

environmental force reduces the effectiveness of the personal force by opposing it. On the other hand, the multiplicative relationship between power and motivation suggests that absence of either force results in zero.

Moreover, there are two possible environmental forces: the difficulty of a given task and luck. If a task is easy, virtually no ability is needed to perform it; otherwise, much ability is needed to perform it. Luck is the supposed reason for an outcome if one succeeds only once in many trials or fails once and succeeds on the remainder of the trials.

1.3.2. The Correspondent Inference Theory of Jones and Davis (1965)

Jones and Davis (1965) developed the correspondent inference theory in an attempt to make Heider's theory more amenable to empirical test. They based their work on Heider's theory and developed a theory that would explain people's naive explanations of human actions. They concentrated on the effects produced by an action. They believe that one can frequently infer an underlying disposition from knowing the effects of the act, even when one does not actually see the act.

In inferring causes or sufficient reasons for individuals' actions, Jones and Davis (1965) differentiate between common and noncommon effects. Common effects, that is, the effects common to many possible actions, do not tell the observer much about why a particular action was chosen by the actor. However, noncommon

effects (i.e., those unique to each course of action) can be more diagnostic and helpful in inferring reason for the choice made by an actor. They postulate that the noncommon effects serve as the basis of an individual's choice of action. Further, they state that these resulting noncommon effects are the desired effects of the action.

According to Jones and Davis' theory, the first comparison between possible choices of action is in terms of the number of noncommon effects. After considering the number of noncommon effects, the perceiver tries to evaluate the assumed desirability of these remaining effects. This likelihood refers to the prior probability that the effect would be seen as desirable by the reference group in question.

Jones and Davis (1965) refer to the perceiver's certainty that the actor's choice is reflective of an underlying personal disposition as the perceiver's correspondence of inference. The combination of noncommon effects and assumed desirability determines the correspondence of inference. More specifically, high correspondence occurs when there are few noncommon effects and when the assumed desirability of those effects is low.

The whole process of inference is called by Jones and Davis as the <u>action-attribute paradigm.</u> This paradigm traces the inference process of the perceiver from the observed effects of an action to the inferred disposition that the action is presumed to reflect.

Two personal needs of the perceiver can affect the inference

process: hedonic relevance and personalism. An act is hedonically relevant if it has negative or positive consequences for the perceiver. Acts with hedonic relevance are more likely to be attributed to the disposition of the actor. Personalism occurs when the perceiver believes that the action he/she observes has been uniquely conditioned by his/her presence. If an actor perceives that he/she is the intended target of another's behavior, the action is seen to be more purposeful. Under the condition of personalism, the tendency to perceive correspondence is greater.

1.3.3. The Attribution Theory of Kelley (1972)

Kelley (1967, 1971, 1972) derived his attribution theory from Heider's original work. He considers the observer as a social scientist. He developed a general theory of how people process various types of information in order to arrive at judgments about the source of causality for an event.

According to Kelley, there are three criteria that people use in making causal judgments (Kelley, 1967). These are as follows:

(1) distinctiveness - The behavior is attributed to a thing if the behavior uniquely occurs in its presence and does not occur in its absence.

(2) consistency - The individual's behavior is the same whenever the thing is present (consistency over time) and the individual's reaction must be consistent even though his/her mode

of interaction with the thing varies (consistency over modality).

(3) consensus - All observers experience attributes of external origin in the same manner.

These types of informational cues can be used to form attributional judgments. Events with high distinctiveness and high consensus are likely to be caused by the particular stimulus (e.g., the joke is funny). The behavior is probably the result of something about the person when there is low distinctiveness and high consistency (e.g., the person always laughs at jokes). The conditions of low consistency, low consensus and high distinctiveness can be attributed to the unique circumstances of the situation (e.g., the person found the joke funny at that particular time).

In his latter writings, Kelley (1971, 1972) elaborated on attribution theory. His paper in 1971 outlined three basic principles by which people make causal judgments. These include principles of covariation, discounting and augmentation. The covariation principle states that effects covary over time with their causes. The discounting principle applies to a situation where there are several possible causes of an event. In this case, the role of a specific cause in producing the effect is lower than if there were no other possible causes. The augmentation principle can be shown in a situation where intent or internal cause is seen as greater because external norms inhibit the behavior.

In 1972, Kelley summarized how people use causal schemata.

A causal schema is defined as a "general conception the person has about how certain kinds of causes interact to produce a specific kind of effect" (Kelley, 1972, p.1). There are two kinds of causal schemata: the multiple-sufficient schema and the multiple-necessary schema. In a multiple-sufficient schema, some effects may result if any of several causes is present; whereas, in multiple-necessary schema, the effect will occur only, if several causes are all operating simultaneously.

1.3.4. Weiner's (1986) Theory of Achievement Motivation

Weiner (1972) initially followed Heider's (1958) idea of four causes of success and failure at achievement tasks, namely: ability (power), effort, task difficulty, and luck. In earlier studies, he argued that despite other sources of causality which are not readily classifiable into these four categories, these four categorizations can be generalized to all achievement tasks. More recently, however, a greater range and diversity of perceived causes have been identified.

Weiner's (1986) review of these investigations showed an overlap of causes into the following: ability, immediate and long-term effort, task characteristics, intrinsic motivation, teacher's competence, mood and luck. Among these causes, ability and effort attributions are said to be most dominant.

Weiner (1986) further identified the basic properties and dimensions of these causes, particularly those of ability and effort. He came up withthree dimensions of causality with some

certainty: locus, stability, and controllability. In addition, there are two other possible dimensions of causality: globality and intentionality. These dimensions will be discussed below.

A basic distinction of causality is its locus or source. Heider (1958) distinguished between factors within the person (internal) and factors within the environment (external). Rotter's (1966) work contributed largely to the domination of internal-external distinction in causal beliefs. Rotter's definition of locus of control was Weiner's basis for identifying location or source of cause.

However, Weiner differentiated his work by separating locus from control. For Weiner, locus and controllability are two distinct dimensions of causality. A second dimension was introduced by Weiner (1986) based on the argument that within the internality-externality dimension, some causes may fluctuate while others may remain constant.

Thus, the dimension of stability also characterizes causality. Based on this characteristic, Rotter's (1966) classification system is considered inadequate. Using the dimensions of locus and stability, the four dominant causes of achievement can be characterized as follows: (1) ability - internal and stable; (2) effort - internal and unstable; (3) task difficulty - external and stable; and, (4) luck - external and unstable.

A third dimension is that of controllability. This dimension was first suggested by Rosenbaum (1972, cited in

Weiner, 1986) and later identified by Weiner (1979). Controllability refers to a cause being subject or not subject to the individual's volitional control.

The following examples show the classification of some causes according to stability and controllability: (1) aptitude - stable, uncontrollable; (2) fatigue - unstable, uncontrollable; (3) long term effort - stable, uncontrollable; (4) laziness/ industriousness - stable, uncontrollable; (5) temporary exertion - unstable, controllable.

Two other possible causal structures are intentionality and globality. The contrast between effort and strategy refers to intentionality, i.e., success might be due to hard work or proper strategy and failure due to insufficient effort or poor strategy (Weiner, 1979). Globality refers to the specificity or generality of a cause (Abramson, Seligman & Teasdale, 1978). Thus, some causes are specific to a situation while others generalize across settings.

These dimensional locations of a cause are associated with the individual's cognitive reactions or cognitive expectancy and affective reactions such as self-esteem, pride, shame, anger, pity (Weiner, 1985; Weiner, Russell & Lerman, 1979). The stability of a cause influences the expectancy of success.

Conversely, if the outcome of an event is attributed to a stable cause, then that outcome will be anticipated with increased certainty or expectancy in the future. On the other hand, if the outcome of an event is ascribed to an unstable

cause, then the certainty of that outcome is either unchanged or anticipated to be different from the past. Generally, outcomes ascribed to stable causes will likely be repeated in the future with greater certainty than those ascribed to unstable causes.

The locus of a cause has affective consequences on self-esteem and pride. More specifically, internal causes elicit greater self-esteem for success and lower self-esteem for failure than do external causes. Controllability has influence both on emotions toward one's self and others. For example, when failure is perceived as controllable by others such as teacher's bias, anger is generated toward others. In general, controllable causes of personal failure (e.g., lack of effort) generate feelings of guilt, while uncontrollable causes (e.g., lack of ability) promote feelings of shame.

This approach finally moves toward behavioral consequences. These behaviors are determined by expectancy and affect. Achievement behavior is measured in terms of one's persistence, latency and intensity at a particular task.

However, Weiner's theory has some limitations. Findings on attributions and gender differences in achievement were challenged by McHugh, Frieze and Hanusa (1982). Weiner (1983) himself pointed out some methodological pitfalls in attribution research. Suggestions for improvement, however, were given by McHugh and colleagues and by Weiner. These two articles will be discussed in the following section.

McHugh, Frieze and Hanusa (1982) noted the failure of the

literature to indicate consistent gender differences in attributions in achievement behavior. They offered two reasons for this failure, namely: situational variables and dispositional variables. Situational variables refer to inadequate consideration of various factors in the situation that influence gender differences in attribution. Dispositional or motivational variables concern the problems of viewing women as a homogeneous group.

Situation-related variables include the task itself and the context in which the task is performed. Several situational variables identified in past studies were the gender of the experimenter, the gender of coacting or competing other, individual versus group performance, size and gender composition of the group, reward structure or degree of competitiveness, public versus private reporting of expectancies, outcome and attributions, and the nature of feedback. Inconsistencies observed in the literature may be accounted for by these situational variables, which should be taken into consideration when doing attribution studies.

Concerning motivational or dispositional variables, there are problems with studying these variables. One major problem is that effects due to personality can be minor when compared to effects related to the context in which the behavior occurred. Furthermore, attributions made for a particular task cannot be necessarily generalized to other situations.

Attribution research must consider its goals or objectives.

If attribution in a particular situation is the focus of the study, it should concentrate on that situation, but should not generalize beyond that situation. On the other hand, if particular groups of people are to be studied, these participants must be assessed in their most typical or most desirable environments.

McHugh, Frieze and Hanusa (1982) also raised methodological issues related to attribution studies in general which include the following: a) the type of task being studied, b) the situation being assessed, c) the individual's definition of, or orientation, to the task, d) the degree to which individuals are intrinsically motivated to perform a particular task, and e) the extent to which and under what circumstances, individuals reflect upon the causes of their behavior when not being prompted by psychologists.

Various ways are recommended to improve achievement research on attributions and gender differences. More specifically, McHugh and colleagues (1982) suggested the study of achievement behavior in multiple contexts, emphasis on individuals' chosen or preferred tasks/domains, and taking into account the individual's definition of both the task and the outcome.

Furthermore, McHugh and his colleagues encourage the use of methods to study spontaneous achievement thoughts of individuals rather than prompting causal attributions. In view of this, more observation methods and measurement of naturally occurring attributions can be employed in research.

Weiner (1983) also discussed some methodological errors in attributional research. In addition, he offered suggestions for improvement. The errors identified by Weiner include the following: (1) failure to manipulate cause; (2) insufficient sampling of causal alternatives; (3) inaccuracy of classifying causes on various categories; (4) predicting expectancy of success instead of expectancy of change; (5) using preference as an indicator of affect; (6) insufficient representation of affects; and, (7) using dependent variables that are inappropriate for testing attributions. Each of these problems will be discussed below.

Regarding failure to manipulate cause, there are two approaches in attributional research: experimental and correlational. Both methods have difficulties related to causality.

In experimental procedures, experimental instructions and/or feedback are employed as a means to manipulate causal perceptions. Feedback or instructions are questioned or negated by three factors: (1) objective characteristics of the task; (2) life experience of the subject; and, (3) experience of the subject during the experiment.

In correlational designs, cause is ascertained by asking subjects their attribution of causality to ability, effort, task difficulty and luck following some outcome. Concerning experimental procedures, Weiner recommended that the instructional manipulation, the characteristics of the task, and

the task feedback should be congruent.

In regard to failure of experimental manipulation due to prior experience, the problem can be solved by using unfamiliar tasks that require unfamiliar skills. Also, one can use tasks that are ambiguous concerning the determinants of success and failure.

In correlational studies, a pilot study would be helpful in determining the most important causes that subjects use in a specific domain. Moreover, this approach in correlational studies can further address the issue of insufficient sampling of causal alternatives in point #2 above.

Another methodological error that Weiner (1983) pointed out is the inaccuracy of classifying causes on various categories (point #3 above). He said that the a-priori categorization of causes has been accepted without considering how the subject perceives the situation.

In 1971, Weiner suggested changing his limited classification of causes into four categories. Thus, "aptitude" instead of ability would have represented internal stable causes better and "objective task characteristics" would have represented external stable causes better. Also, "chance" would be an external unstable cause. He further said that the best way to deal with this research flaw is to have the subjects rate the cause in question on perceived stability.

In regard to the predicted variable of anticipated success or failure (point #4 above), Weiner noted that one must be

careful in selecting the dependent measure. Variables such as expectancy, expectancy change or certainty can be appropriate in various contexts. In using expectancy change, one can obtain expectancy extimates prior to actual performance, as well as one or more times following performance feedback.

Regarding points #6 and #7 Weiner pointed out two problems that are evident in relating causal ascriptions to affect: using preference as an indicator of affect and insufficient representation of affects. The subject's preference does not necessarily reflect positive affect usually assumed by researchers. Thus, one must consider the affect being examined in order to identify the relationship between preference and affective intensity.

Another methodological error is that the range of affective experience is not fully represented. For instance, success in an achievement task might result in pride, gratefulness, happiness, etc. Likewise, failure can produce guilt, low self-esteem, anger and/or frustration (Weiner, Russell & Lerman, 1978, 1979, in Weiner, 1983).

Most attribution studies on attribution-affect relationships do not provide an adequate number and range of affects under investigation. Weiner offered ways to correct these methodological errors. The locus dimension, like the stability dimension, must be estimated directly. It is best to use external criteria such as social norms and objective task characteristics as some kind of framework.

Concerning the study of affect, one must note that preference is not a substitute for affect. A wide variety of affects are experiences in achievement situations. Also, attributions and affects in achievement situations are related in complex ways. Thus, one must examine multiple attributions and many affects for best results in causal thought and affect.

Finally, another research flaw in attribution refers to the use of dependent variables that are inappropriate for testing attributions (point #7 above). The relationship between intensity of action and expectancy of success has not been studied with certainty. The same thing holds true for the relation between the affective value of goal attainment and subsequent performance quality and intensity. These dependent variables may not be appropriate for testing attributions. This error in the choice of the dependent variables is more apparent in investigations relating causal perceptions to grade-point average or to performance at a specific academic examination. Weiner suggests path analytic techniques when using variables that predict grade-point average or examination performance.

1.3.5. Summary of the Theoretical Framework of this Study

Heider (1958) founded the attribution theory based on naive psychology which include the concepts of subjective environment, perceiving, suffering, experiencing or being affected by, causing, can, trying, wanting, sentiments, belonging, ought and may. According to Heider, an outcome is an additive function of

the effective environmental force and the effective personal force.

Jones and Davis (1965) developed their correspondent inference theory to make Heider's theory amenable to empirical test. The whole process of inference is called action-attribute paradigm which traces the inference process of the perceiver from the observed effects of an action to the inferred disposition that the action is presumed to reflect. The tendency to perceive correspondence is greater under the condition of personalism, i.e., when the perceiver believes that the action s/he observes has been uniquely conditioned by her/his presence.

Based on Heider's original work, Kelley (1967, 1971, 1972) developed a general theory of how people process various types of information in order to arrive at judgments about the source of causality for an event. The three criteria that people use in making judgments are distinctiveness, consistency, and consensus (Kelley, 1967).

Kelley (1971) later elaborated on attribution theory by including covariation, discounting and augmentation as the basic principles by which people make causal judgments. In 1972, he summarized two kinds of causal schemata and how people use them, i.e., multiple-sufficient schema and multiple-necessary schema.

Weiner (1972) initially followed Heider's (1958) idea of four causes of success and failure at achievement tasks, namely: ability (power), effort, task difficulty, and luck. However, Weiner (1986) recently identified a greater range and diversity

of perceived causes such s ability, immediate and long-term effort, task characteristics, intrinsic motivation, teacher's competence, mood and luck. Among these causes, ability and effort attributions are said to be most dominant.

Weiner (1986) also named the three basic properties and dimensions of these causes: locus, stability and controllability. There are some methodological limitations in Weiner's theory to which he offers appropriate solutions.

1.4. The Goals of the Present Study

The present study uses Weiner's (1986) recent model of achievement motivation but improves on it through two areas that he suggested, specifically: insufficient sampling of causal alternatives and using dependent variables that are inappropriate for testing attributions (see Section 1.3.4.).

The causal attributions used in this study are based on Watkins and Astilla's (1984) investigation of attribution and achievement among Filipino adolescents in the Philippines where they identified ten sources of attribution. These ten attributions, on the other hand, were based on Weiner's (1982) original conceptualization of ability, effort, task and luck but were more specific and broader in range. The use of these ten sources of attribution may then address the methodological issue of insufficient sampling of causal alternatives.

In addition, Weiner (1983) suggested that in investigations relating causal perceptions to grade-point average, path-analytic

techniques should be used in analysis. The present study employs path analysis in examining the relationship between attribution and academic achievement measured through grade-point average. Therefore, it may appropriately relate attribution to the dependent variable of GPA in contrast to previous attribution research.

Moreover, the present study also acknowledges other limitations of Weiner's theory in that it was not developed to account for ethnic-related differences and other variables affecting achievement, aside from causal attribution. More specifically, academic achievement may be accounted for by other variables such as parenting or socialization and demographic characteristics of the sample such as family structure, age and gender. Additionally, these variables may be greatly influenced by the adolescents' ethnic background.

Thus, the present study aims to examine the academic achievement of Filipino adolescents operationalized through GPA using Weiner's model of attribution and the other variables of achievement that were not included in Weiner's theory. Finally, a path-analytic model of achievement in Filipino adolescents is being proposed in the present study.

1.4.1. Factors Influencing Academic Achievement

Aside from causal attribution, the present study will also examine several variables influencing academic achievement. These include the following: (1) General Parenting practices

based on the Children's Report of Parental Behavior Inventory-30 (Schludermann & Schludermann, 1970); (2) Academic Socialization Styles based on Baumrind's (1966) original conceptualization of parenting dimensions and later developed into academic socialization styles by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987); (3) Demographic Characteristics of the parents such as Gender, Age, Family structure, Education, and Parental Involvement; and (4) Student Responses such as Student Involvement in their school work and Importance of Family Reputation as well as Student Characteristics such as Age and Gender.

Although this study is focused on a specific ethnic group, i.e., Filipino adolescents, there will be comparisons made of the two samples used whenever applicable and appropriate. The two samples come from Winnipeg, Canada and the San Francisco Bay Area, United States.

1.4.2. A Path-Analytic Model of Achievement in Filipino Adolescents

Finally, this study also has the goal of incorporating the relationships among these variables into a path-analytic model of achievement in Filipino adolescents. This model will be developed through path analysis in which the independent variables consist of the above enumerated variables and GPA is the dependent variable. Through this model, it is hoped that one would have a clearer and more complete integration of the

significant variables of academic achievement in Filipino adolescents.

Furthermore, this Filipino-based path analytic model may provide a culturally-appropriate basis of analysis of achievement behavior inasmuch as most studies of achievement behavior utilized samples of White adolescents and the results may not be generalizable to ethnic minorities.

CHAPTER 2: EMPIRICAL STUDIES ON ADOLESCENT ACADEMIC ACHIEVEMENT

In this chapter, the discussion moves from the theoretical background of the present study to empirical studies on adolescent academic achievement. There are five variables of achievement that will be considered in this study and empirical studies on each variable will be summarized. These variables are: causal attribution, general parenting practices, academic socialization, ethnicity and gender.

2.1. Causal Attribution and Achievement

Several studies provided empirical support to Weiner's (1986) recent theory of achievement (e.g., Kun & Weiner, 1973; McMahan, 1973; Rest, Neirenberg, Weiner & Heckhausen, 1973; Weiner & Kukla, 1970). There are also some studies that utilized cross-cultural samples (e.g., Chandler, Shama, Wolf & Planchard, 1981; Kojima, 1984). In addition, three studies were conducted with Filipino adolescents in the Philippines, one of which was the basis for the Attribution Questionnaire in the present study (Watkins, 1982b; Watkins & Astilla, 1980b, 1984). These empirical studies will be presented below.

Six experiments were conducted by Weiner & Kukla (1970) to determine the relationship between attribution and achievement motivation. The first three experiments showed that achievement is positively associated with the amount of effort exerted, but inversely related to the level of ability. The three experiments were simulated teaching experiments.

In the first experiment, twenty paid male students were told to evaluate twenty experimental conditions as a classroom teacher by giving feedback on an examinationination to their pupils. The same procedures were used in the second experiment but, the subjects consisted of middle- and upper-class male high-school students to be able to generalize to these social classes.

The third experiment differed from the first two experiments in that the subjects were female student teachers, and an experimental condition was added in which the subjects were instructed to estimate how much pride or shame they would personally experience in the various experimental conditions.

Experiments 4 and 5 examined the locus of causality and achievement needs. The results of both experiments demonstrated that individuals with high achievement motivation were more likely to attribute success to themselves than individuals low in achievement motivation.

In Experiment 4, elementary school students were given the Intellectual Achievement Responsibility (IAR) scale and a measure of resultant achievement motivation while the high school students were administered the Thematic Apperception Test and Test Anxiety Questionnaire in addition to IAR and a test of resultant motivation.

In Experiment 5, 71 male psychology students were given a measure of resultant achievement motivation and an ambiguous task in which performance might be perceived as determined by either luck or skill.

The sixth and last experiment investigated whether individuals can use task-difficulty information to infer causality and the function relating probability to attribution in success and failure situations. The subjects consisted of 30 male and 46 female students from two psychology classes. The experiment was administered to groups and each subject was asked to rate the locus of causality for nine success and nine failure conditions. The findings revealed that judged self-attribution for success was inversely related to stated group success. On the other hand, personal ascription for failure was positively associated with the stated group success.

These findings were further explored in three experiments performed by Rest, Nierenberg, Weiner & Heckhausen (1973). In Experiment 1, it was examined how Effort as a trait versus effort as a state influenced achievement evaluation. A simulated teaching experiment was done with 30 university students similar to Weiner & Kukla's (1970) procedures. Previous findings of Weiner & Kukla were replicated in Experiment 1. That is, high Outcome, high Effort and low Ability yielded achievement rewards.

In Experiment 2, the level of task difficulty was manipulated between subjects to find out its influence on performance evaluation. A group of 81 Swiss school teachers served as subjects in this experiment. The findings indicated that the more successful the outcome and the greater the effort, the larger the dispensed rewards. However, the low-ability effect was small.

In Experiment 3, it was hypothesized that the low-ability effect was a result of differential effort inference. A between-subjects design was used in which each subject was presented only one hypothetical stimulus person to evaluate. The subjects were further asked to rate the degree of success or failure of a pupil, his/her effort and his/her level of ability. The results in this experiment differed from other studies in that they did not show a main effect of ability on evaluative judgments.

The findings by Weiner & Kukla (1970) were confirmed in these three experiments; that is, outcome and perceived immediate effort influenced achievement evaluation. Moreover, when effort was viewed as stable, it augmented reward.

The hypotheses from attribution theory were also supported in a study by Kun & Weiner (1973). Using college students as subjects, they were asked to imagine themselves as high-school teachers and make judgments about the contributions of ability and effort to examination performance.

The data in Kun & Weiner's study revealed that a multiple-sufficient causal schema explained common events, while a multiple-necessary schema explained uncommon events. The <u>multiple-sufficient causal schema</u> means that the presence of ability or effort is perceived as enough to produce success in common events. <u>Multiple-necessary causal schema,</u> on the other hand, means that success in uncommon tasks requires both ability and effort.

McMahan (1973) studied the relationships between causal attributions and expectancy of success. The data from both genders were combined for each grade level, because no significant gender differences were found on preliminary analyses of expectancy or attribution.

The subjects consisted of 109 sixth-grade, 81 tenth-grade, and 146 college students. They were asked to solve five-letter anagrams. Prior to each anagram, they were asked to rate their confidence in reaching the correct solution on an 11-interval scale. These ratings were scored from 0-10 and were used to measure expectancy of success.

There were two hypotheses tested in McMahan's (1973) study. The first hypothesis was that outcomes that do not confirm a prior expectancy are attributed more to variable factors (effort and luck) than to fixed, stable factors (ability and task difficulty); outcomes that confirm a prior expectancy are attributed more to fixed factors than to variable factors. The second hypothesis postulated that the relationship between attributions to fixed factors and subsequent expectancy is positive following success and negative following failure; attributions to variable factors are either unrelated to subsequent expectancy or show a negative relationship following success and a positive relationship following failure.

Hypothesis 1 was confirmed on Ability, Effort, and Luck scores but not on task scores. This would mean that the subjects were less likely to say that they had succeeded because the task

was easy than to say that they had failed because the task was hard. The predictions of Hypothesis 2 were confirmed. Thus, the results gave partial support to the first hypothesis and confirmed the second hypothesis.

Regarding cross-cultural support for Weiner's (1986) theory, Kojima (1984) studied attribution and achievement behavior both in the experimental and educational settings using Japanese students, i.e., Study I and Study II, respectively. In Study I, the subjects consisted of 320 male third year junior high school students in Yokohama. Using a digit-symbol substitution task as the experimental task, the following were hypothesized:

(1) The expectancy of success is influenced by causal attributions with the stability dimension as the determinant of expectancy shift.

(2) The performance in achievement tasks is influenced by one's causal ascriptions.

(3) Subjects with high versus low achievement motivation differ in their attributional patterns.

The task performance was measured by the total number of attempted substitutions per trial. The subjects were asked following each trial to attribute their success or failure to ability, effort, task difficulty and luck. The above hypotheses were confirmed in Study I.

In Study II, the subjects were the same as those of Study I, but the procedure was different. About a week after their midterm examination in mathematics, the subjects were asked to

answer questions as follows: (1) the marks they got in the test; (2) how they felt about their marks (i.e., a feeling of success or a feeling of failure); (3) the reasons for their feeling of success; (4) the reasons for their feeling of failure; and, (5) the marks the students expected to get in the next test.

Only the responses of the students who expressed a feeling of failure about their marks were analyzed. It was found that, compared to low attributions, high attribution to Ability and Task Difficulty resulted in less expected marks. Also, high ascription to luck resulted in higher expected marks than low ascription to it.

Moreover, concerning achievement motivation, the subjects who had low achievement motivation were likely to attribute their failure more to ability than those subjects with high achievement motivation. The two groups did not differ in their attributions to effort and task difficulty. Regarding luck, the subjects with high achievement motivation attributed failure more to this than the subjects with low achievement motivation.

Furthermore, a five cross-nations-sample study gives cross-cultural evidence for attributional model of success and failure. Chandler, Shama, Wolf and Planchard (1981) utilized both locus and stability dimensions of attribution in studying achievement in five cultures.

The subjects comprised 684 university students from India, Japan, South Africa, Yugoslavia and the United States. They were

enrolled in three fields, namely: education, physical science and social science. They were asked to fill out the Multidimensional Multiattributional Causality Scale (MCCS). The questionnaire had 24 items in affiliation domain and another 24 items on achievement domain.

A 5x2x3x2 factorial design was employed to assess the effects of five countries, both genders, and three academic majors repeated across both success and failure situations. The results showed that subjects across the five countries attributed their achievement more to their own Effort than to their ability, luck or the context. In general, subjects ascribed cause of achievement more to themselves than to external factors and more to variable than stable factors.

Significant differences were found between the success and failure conditions; there were also country x success/failure interactions. Concerning success and failure conditions, subjects from all countries attributed their success significantly more than their failures to ability, effort, luck and overall internality. Conversely, they attributed their failures more than their successes to context and more variable causes.

With regard to interactions between country and success/ failure conditions, statistically significant data were obtained for ability, effort, context and luck, as well as for internality and stability. When simple main effects were considered, it was found that only the American subjects reported their failures

more than their successes to be caused by contextual factors.

In addition, only the Indians did not believe that luck contributed more to their success than to their failure; instead, they believed luck to contribute equally to success and failure. Looking at the composite indices, except for Japan, subjects from all countries attributed achievement success, rather than their failures, to Personal Responsibility.

Also, subjects from all countries except Yugoslavia attributed their failures significantly more than their successes to unstable rather than more stable causes. Yugoslavians, in contrast, attributed their successes more than their failures to unstable causes.

Chandler and his colleagues (1981) interpreted these findings as support for the differential-attribution model for success and failure. Moreover, the stability dimension of attribution was also supported with results consistent with predictions of the attribution model, i.e., subjects attributed their failures more than their successes to the unstable causes.

Three attribution studies that deal with the causal attributions of Filipino adolescents in the Philippines are relevant to the purpose of the present study. They were conducted by Watkins (1982b) and Watkins & Astilla (1980b, 1984). The first two studies are based on Weiner's theory, Watkins & Astilla (1980b) and Watkins (1982b) while the third one is a reconceptualization of Weiner's theory, i.e., Watkins & Astilla (1984). The third study is actually the basis for the ten

sources of attribution used in the present study.

The first study by Watkins and Astilla (1980b) examined the causal attributions of freshmen in a prestigious private university in central Philippines. Using Weiner's (1979) model of attribution, the subjects were asked their attribution of causes of achievement in a forthcoming college examination.

The findings indicated that adaptive patterns of attribution were used by the students. That is, they ascribed possible success to Internal (ability, effort) rather than External (task difficulty, luck) sources, but attributed failure equally to these sources. Luck was perceived to be of minor importance only.

Support was found for this pattern of attribution in success condition. Internal attribution had significant correlations with satisfaction with success in three out of four cases. The study further showed that Filipino females attributed success to internal causes and failure to external causes.

A limitation of Watkins and Astilla's (1980b) study, though, is that the subjects consisted of individuals who were not necessarily typical of Filipino youth. These youth were in a prestigious private university implying that they already passed competitive admission tests and were striving hard for a university education. They were also more likely to belong to middle and upper social classes since private universities ordinarily cost more than other schools.

In order to look at possible differences between them and

other youths, causal attributions of rural Filipinos were examined. Watkins (1982b) employed 82 males and 112 females, aged 10-15, from a central school in a small barrio in the Western Visayas (central) area of the Philippines.

The students were asked to rate their performance on a major school examination. Their school performance was assessed both objectively and subjectively, i.e., based on their own rating of their performance as well as their grades. Then they were instructed to rate the importance of ability, effort, test difficulty and luck as causes of their performance on a 4-point scale (where 1= unimportant, 2=slightly important, 3=fairly important and 4=very important).

The data indicated that all four sources of attribution were rated as being quite important causes of academic performance with Luck as the least important cause. This result seems to be consistent with the findings of Watkins and Astilla (1980b) cited earlier.

An analysis of variance was done to see possible differences between the ratings of importance in the four possible causes. Both males and females had significant results. More specifically, the significant differences were found to be between effort and luck ratings for the males and between luck and each of the other three ratings for the females.

Moreover, the main effects of gender and academic achievement upon causal attributions were examined. Significant main effects were obtained for ability, effort and luck. An

analysis of individual means reveals that unsuccessful students, regardless of gender, were least likely to attribute their poor results to ability or effort. Males were more likely to assign causes to the unstable factors, effort and luck. Except for this finding on gender difference, these two studies on attribution and achievement of Filipino children (Watkins & Astilla, 1980b and Watkins, 1982b) both support the presence of reasonably adaptive patterns of attribution.

A significant study on the attribution of Filipino adolescents was done by Watkins and Astilla (1984). Although based primarily on Weiner's (1980) model, this study utilized a reconceptualization of Weiner's theory. That is, the four major causes of achievement were not used; instead the authors developed a list of ten possible causes of examination achievement on the basis of earlier research (Bar-Tal and Darom, 1979) as well as interviews with Filipino students during a previous study (Watkins and Astilla, 1980b).

Aside from the dimensionality of attributions, this research also investigated the antecedents and study method correlates of the causal attribution of the Filipino youth. The subjects consisted of 143 males and 118 females in a major private secondary school in the central Philippines. They were in their fourth/senior (final) year in high school. Their ages ranged from 16-18.

The students were asked to rate the likely importance of each of the ten factors in their forthcoming college entrance

examination on a four-point scale where 1=not important to 4=very important. The ten factors were as follows: (1) "My ability"; (2) "How hard I tried in the examination"; (3) "How much I prepared for the examination"; (4) "How difficult the examination items are"; (5) "How difficult the material being tested is"; (6) "My interest in the subjects being tested"; (7) "My teacher's explanation of the materials in the examination"; (8) "The conditions at home being suitable for study"; (9) "Luck", and (10) "Fate or destiny".

The students' scores were also obtained for the Coopersmith Self-Esteem Inventory (1966), internal locus of control for success and failure using the Crandall et al.'s instrument (1965), self-academic rating, socioeconomic status, IQ using the Otis-Lennon Mental Abilities Test (1967), school grades and study methods using Bigg's Study Process Questionnaire (1979). Bigg's questionnaire provides scores on three dimensions: utilizing, internalizing and achieving.

The results revealed a similar ordering of the relative importance of the causes by the boys and girls. Some causes were rated by the subjects to be of more importance than the others, i.e., ability, effort in exam preparation, teacher's explanation.

In addition, a factor analysis of the 10 attribution ratings provided support for Weiner's Internal/External and Control dimensions. The responses did not show male or females differences in this area. Using canonical analysis with 10 attribution scales entered as one set of variables, two

significant correlations were obtained. The first variate was that females tended to use Stable causes to explain their examination performances. The second variate showed that girls with low IQ and low academic self-rating were likely to externalize causes for examination performance.

Finally, correlations between the ten attribution ratings and Bigg's 3 study-process dimensions were conducted separately for boys and girls. It was found that for the girls, higher attribution to External, Uncontrollable factors led them to adopt a rote-learning approach out of fear of failure. For the boys, attribution to Internal factors led to an emphasis on internalizing and achieving approaches to study.

2.2. General Parenting Practices and Achievement

General parenting practices greatly affect the achievement of children and adolescents. Early studies on child-rearing characteristics of parents of delinquents and emotionally-disturbed children provided the impetus for the study of child-parent relations.

Based on these studies, Symonds (1939) proposed 2 major dimensions of parent behavior: Acceptance-Rejection and Dominance-Submission. The accepted child would be cared for and wanted by one's parents. Dominating parents refer to those who exercise a great deal of control over the child by being very strict and authoritarian with him. Submissive parents, on the other hand, refer to those who permit the child a great deal of

freedom and accede to the child's demands and wishes.

In the 1940s, Baldwin (1948) identified parental dimensions of Democracy and Control. The main characteristic of democracy was a high level of verbal contact between parent and child, explanation of reasons for the family rules and verbal explanation in response to the child's curiosity. Democracy was also found to be associated with control in that most democratic homes were controlled.

Later on, Schaefer (1959) investigated maternal behaviors through factor analysis. He developed a circumplex model of maternal behavior concepts which were divided into two main dimensions: Love-Hostility and Control-Autonomy.

Becker also (1964) conducted a series of factor analyses and formulated three general dimensions of parental behavior. He came up with a Warmth versus Hostility dimension similar to that of Schaefer's (1959).

However, he subdivided Schaefer's control versus autonomy dimensions into Restrictiveness versus Permissiveness and Anxious-emotional Involvement versus Calm-detachment. Warmth is defined by the following variables: accepting, affectionate, approving, understanding, child-centered, frequent use of explanations, positive responses to dependency behavior, high use of reasons in discipline, high use of praise in discipline, low use of physical punishment, and (for mothers) low criticism of husband. The Restrictiveness versus Permissiveness dimension was represented in the Restrictive end as follows: many restrictions

and strict enforcement of demands in the areas of gender play, modesty behavior, table manners, toilet training, neatness, orderliness, care of household furniture, noise, obedience, aggression to siblings, aggression to peers, and aggression to parents. Anxious-emotional involvement is represented on the Anxious end as follows: high emotionality in relation to child, babying, protectiveness, and solicitousness for the child's welfare.

Thus, parental dimensions can be generalized into two: Warmth or Acceptance and Control or Restrictiveness/ Permissiveness. The empirical studies on these parenting dimensions and practices will be discussed below.

2.2.1 Parental Warmth and Achievement

Most studies have shown that parental Warmth operates differently upon the achievement orientation of boys and girls (Abrahamson, 1977; Bayley & Schaefer, 1964; Crandall & Battle, 1970; Crandall, Dewey, Katkovsky & Preston, 1964; Crandall, Preston & Rabson, 1960; Douvan & Andelson, 1966; Kagan & Freeman, 1963; Kagan & Moss, 1962; Rosen & D'Andrade, 1959; Solomon et al., 1971; Winterbottom, 1958). A positive association is found between parental Warmth/Acceptance and boys' achievement orientation. High maternal Warmth/acceptance is positively related to strong achievement orientation in boys while moderate maternal Warmth is related to strong achievement orientation in girls. Very high levels of early maternal Warmth is associated

negatively with achievement orientation in girls, but not in boys.

A group of 29 eight-year-old boys and their mothers were studied to identify the relationship between achievement motivation and learning experiences in independence and mastery (Winterbottom, 1958). The hypothesis that mothers of the high-achievement group would report more demands was not confirmed. However, the hypothesis that mothers of the high-achievement group would make these demands earlier was supported.

Another study on children that revealed a similar pattern was that of Solomon, Houlihan, Busse & Parelius (1971). The subjects consisted of 72 sets of Negro parents and their fifth-grade children. Three important variables were investigated, namely: parental child-rearing practices, children's locus-of-control beliefs and children's achievement behaviors.

Locus-of-control beliefs were viewed as mediating parental behaviors while parental behaviors were seen as indirect variables influencing the achievement behaviors of children. The results showed that moderate parental Warmth contributed to achievement behavior. High Warmth or babying, on the other hand, minimized achievement behavior.

With boys aged 9-11, Rosen & D'Andrade (1959) conducted a study examining parental behaviors of Warmth, rejection and pushing, and children's achievement motivation. It was

demonstrated that parents of boys with higher achievement motivation tend to have higher aspirations for their sons and a higher regard for their sons' competence at problem-solving.

The findings revealed that the fathers of boys with high achievement motivation were on the average less rejecting, less pushing and less dominant whereas their mothers were above average in dominance, rejection and Warmth. The mothers, but not the fathers, were more likely to reward their sons with Approval (Warmth) but also to punish them with Hostility (rejection). Although maternal Warmth was only indirectly related to achievement, it did affect achievement.

A study of 30 preschool children and their mothers assessed three parental behaviors as possible antecedents of children's achievement development (Crandall, Preston & Rabson, 1960). These were: maternal affection-rejection, independence training, and maternal reactions to achievement behaviors.

It was found that neither maternal affection nor independence training was predictive of the children's achievement behavior while direct maternal rewards of achievement efforts and approval-seeking were. Nevertheless, there was a trend, although not significant, for mothers who frequently rewarded achievement efforts of their children to be less nurturant toward their children and more encouraging of independence in their children than mothers who did not reward children's achievement efforts.

With elementary children, associations between general

parental behaviors of Affection, Rejection and Nurturance and the reading and arithmetic test performances were analyzed (Crandall, Dewey, Katkovsky & Preston, 1964). The sample consisted of 40 early-grade-school children and their parents.

Significant correlations were found only in mothers and their daughters. It was found that girls who were competent readers had both less affectionate and less nurturant mothers when compared to girls who were less competent in reading. Moreover, mothers of girls who were good in mathematics were low in nurturance.

Concerning the absence of similar effects on boys, the authors accounted for this through the girls' higher degree of susceptibility to adult influence. That is, the girls' achievement efforts might be more influenced by adult approval as opposed to the boys' autonomously determined achievement behavior.

In contrast to these findings, Maternal Warmth predicted achievement-related behavior for boys, but not for girls (Bayley & Schaefer, 1964). Sons of affectionate, accepting, egalitarian and autonomy-granting mothers made below average intelligence scores in the first years but gained rapidly in the next few years, such that by age five they were more likely to have high IQs. Conversely, sons of mothers who were hostile, punitive, and rejecting were active and unhappy who had high intelligence scores at first and lower IQs after age four.

The researchers postulated that the girls' intellectual

functioning is more genetically determined after age four than the boys since the girls' intelligence after age four tended to be relatively independent of maternal behaviors. Moreover, it was also proposed that there was the possibility of significant relations between fathers and daughters, if information were available.

This finding gave support for a few studies where cross-gender influence on achievement was shown. Hartup (1968), for instance, did experimental studies pointing to this possibility where boys valued nurturance from a female and girls were more affected by nurturance from a male. Also, Helson (1971) studied a group of doctorate-holding female mathematicians and differentiated between more creative and less creative achievers. It was shown that the more creative women were alienated from their mothers and identified primarily with their fathers who in turn gave them little affection or attention. The opposite was true for the less creative women.

Some studies with adolescents appear to yield similar results as studies with children. Adolescent boys and girls from several schools were interviewed concerning various aspects of the adolescent life (Douvan & Adelson, 1966). When asked about plans and goals for the future, girls who showed little motivation for intellectual or occupational achievement and had marriage as their main concern expressed a close, warm and dependent relationship to their parents. In contrast, girls who were achievement-oriented had pleasant, although not close

relationships, with their parents.

Adolescent achievement was studied by Kagan & Freeman (1963) by examining the relationship between the following variables: (1) child's IQ at 3 1/2, 5 1/2 and 9 years of age; (2) parental educational level; (3) maternal child-rearing practices during ages 2 through 7; and (4) selected aspects of child's personality during adolescence.

With adolescent females, a positive relationship between task withdrawal and maternal affection was seen. That is, adolescent females who tended to withdraw from achievement tasks had mothers who had been highly accepting and affectionate during the early years.

Similar results were found in an earlier study by Kagan & Moss (1962). For girls, the pattern that would most result in adult intellectual mastery was Maternal Hostility toward the daughter during the first three years and acceleration of mastery behaviors during the period from age 6 to age 11. Thus, early protection of girls was associated with adult passivity and feminine interests. For boys, a different pattern led to intellectual achievement. This was early maternal protection followed by encouragement and acceleration of mastery behaviors.

Different findings, however, were obtained by Abrahamson (1977) in his study of junior-high and high-school students. Using GPA as the measure of achievement, he proposed a curvilinear relationship between parental acceptance or rejection and adolescent academic achievement.

The results, however, did not support the hypothesis. Instead, a U-shaped line, not an inverted-U or curvilinear, relationship was found between maternal Warmth/acceptance and adolescents' GPA. A cubic relationship was found, though, between paternal Warmth and children's GPA. It was suggested that future research consider the father's behavior as well. This suggestion is similar to the recommendations of some studies cited earlier such as those of Bayley & Schaefer (1964), Hartup (1968) and Helson (1971).

2.2.2. Parental Restrictiveness/ Permissiveness and Achievement

Restrictiveness when equated with control would mean extensive proscriptions and prescriptions on the child's life that limit his/her autonomy. In general, Permissiveness has a positive influence on children's achievement. It appears, though, that some variables may be important additional factors. These include parental Warmth (Becker, 1964) or high demands on the child (Baumrind, 1971).

Restrictiveness/Permissiveness has interacting effects with Warmth-hostility on the child's behavior. Becker (1964) reported that when combined with moderate or high Warmth, Restrictiveness is associated with dependency and conformity. Warm-restrictive parents tended to have passive, well-socialized children.

Conversely, permissiveness in this context is associated with independence in children. Children of warm-permissive

parents were socially outgoing, successfully aggressive, independent and friendly. Baumrind (1971) found that permissive upbringing for girls, but not for boys, may be beneficial to the development of achievement orientation in the preschool years. Permissive parenting clearly inhibited achievement-oriented behavior of boys.

In contrast, the girls' above-average scores on Achievement Orientation and Independence were associated with two different patterns of permissive parenting. One pattern was characterized by high stimulation and demands. The other pattern was characterized by absence of pressure toward either conformity or anticonformity. In both patterns, however, dependence upon social norms was avoided so as not to inhibit the development of competence or achievement.

In studying direct control tactics on preschoolers, Hess & McDevitt (1984) showed the negative consequences, not of firm or direct control per se, but of its extreme uses. Two possibilities were examined: (1) that direct-control techniques in both teaching and disciplinary situations will be correlated negatively with later school-related performance, and, (2) that children of mothers who use a high proportion of direct-control techniques in both teaching and disciplinary situations will perform more poorly on tests of scholastic achievement than will children of mothers who use both direct and indirect tactics. The results supported both hypotheses.

Using a sample of elementary-school children, Banner (1979)

examined the relationships between child-rearing attitudes of mothers and achievement level of their grade six children, measured through test scores in reading and mathematics. Attitudes of mothers of under-achievers were characterized by more rigid dominance, intolerance and restriction of independence of their children. Although maternal attitudes were restrictive for both boys and girls, they have different manifestations. Mothers of under-achieving sons were restrictive in the sense of being possessive and intrusive. Mothers of under-achieving girls were restrictive in terms of being protective.

Among adolescent females, Parental Restrictiveness is associated with low achievement aspirations (Douvan & Adelson, 1966). It is instead positively related to femininity and passivity for young children and adolescents. This probably explains the link between parenting practices and achievement. Child-rearing practices that lead to femininity are antagonistic to those associated with achievement behavior and related characteristics (Douvan & Adelson, 1962; Kagan & Moss, 1962; Nuttall & Nuttall, 1976).

Nuttall & Nuttall (1976) studied the relationships between parenting practices and the academic motivation of 233 teenaged girls and 300 teenaged boys. It was postulated that boys who perceived their parents, especially their fathers, as Acceptant, Firm in Discipline and Low in Hostile Control would have higher achievement motivation. For girls, it was hypothesized that those who perceived their parents, particularly their mothers, as

Acceptant, Firm in Discipline and Low in Hostile Control would tend to score highly on academic motivation traits. The findings for both boys and girls were in the predicted directions.

2.3. Academic Socialization and Achievement

The concept of parenting dimensions has undergone considerable change with recent studies utilizing patterns of parental behaviors instead of specific dimensions of parenting. Baumrind (1966, 1967) identified three parenting styles based on her original classification of the four dimensions of consistent discipline, maturity demands, restrictiveness, and encouragement of independent contacts.

In a more recent conceptualization, Baumrind (1977, cited in Maccoby & Martin, 1983) employed two dimensions only: parental Demandingness and parental Responsiveness. From these, she identified three parenting styles: Authoritarian, Authoritative and Permissive. She defined them as follows:

(1) The Authoritarian parent attempts to shape, control and evaluate the behavior and attitudes of the child according to a specified standard.

(2) The Authoritative parent attempts to direct the child's activities in a rational, issue-oriented approach. and,

(3) The Permissive parent attempts to behave in a non-punitive, acceptant and affirmative manner toward the child's impulses, desires and actions.

In general, the Authoritative style seems to be the most

favorable type of parenting. Authoritative control was found to be related to a well-socialized but willful, independent child. Three related studies by Baumrind (1967, 1971) and Baumrind & Black (1967) were conducted with preschoolers to examine children's competence and the results support the effectiveness of Authoritative parenting.

However, this relationship does not seem to apply to Black children. It was found that in contrast to White children, the most Authoritarian of the Black families produced the most self-assertive and independent girls (Baumrind, 1972). The author postulated that Black families may not be characterized by the Authoritarian personality syndrome with which the adverse affects of Authoritarian child-rearing practices are associated. Moreover, Black girls may perceive the goal of developing toughness and self-sufficiency as nurturant caretaking, not parental rejection.

A reformulation of Baumrind's (1966, 1967, 1977) conceptualization of parenting styles was tested in relation to adolescent school performance (Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987). Thus, Baumrind's parenting typology forms the basis for the academic-socialization variables to be studied in the present study.

Three empirical studies on the effects of academic socialization will be presented below. These include two studies by Dornbusch and his colleagues (Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987; Dornbusch, Prescott & Ritter, 1987) and

a study by Steinberg, Elmen and Mounts (1989).

The study, done in 1985, by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987) used a large and ethnically diverse sample of 7,836 high-school students from the San Francisco Bay Area. A follow-up study was done in 1986 with 8,000 students as subjects, half of whom participated in the 1985 study. In this follow-up study, 611 reported speaking an Asian or Pacific language in the home. Dornbusch, Prescott & Ritter (1987) based their study on the sample of the follow-up study.

Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987) tested a reformulation of Baumrind's typology of Authoritarian, Authoritative and Permissive parenting styles in relation to adolescents' school performance. The students answered a questionnaire developed for this study which contained several items including student background characteristics, self-reported grades, perceptions of parental attitudes and behaviors, and family communication patterns. In addition, information for parental education were obtained from two sources: a questionnaire was sent earlier to a sample of students in five out of the six participating schools and parental responses to a family questionnaire mailed to homes of all students who participated in the study.

Various variables were found to be related to parenting styles. Females reported a slightly lower level of Authoritarian parenting which was found to be statistically significant. It was shown that the Authoritarian index decreased with age while

Permissiveness increased with age.

Differences among ethnic groups were also obtained. Asian, Black and Hispanic families reported a higher Authoritarian score for both genders than the White families. Females who are Asian, Hispanic and black were lower on the Authoritative index than their White counterparts. Differences in Permissiveness were more complex; that is, compared with Whites, Hispanics were higher, Blacks were lower and Asians slightly higher.

Furthermore, parents with higher education were somewhat lower in Authoritarian and Permissive parenting and higher on Authoritative parenting. Also, higher Permissiveness was found among single mothers for their sons and single fathers for both genders.

In examining the relationship between parenting styles and grades, interesting findings were revealed. Support for earlier studies on parenting and achievement was found, i.e., a negative correlation between Authoritarian parenting and Permissive parenting and grades; and, a positive correlation between Authoritative parenting and grades.

The relation of parenting styles to grades was further studied within groups that differ on age, ethnicity, family structure or education. The findings above can be generalized across ages, social classes and family structure groups. The only different correlation was in the least common family structure, that is, single fathers, where correlations did not confirm predictions.

Across ethnic groups, it was found that Authoritarian and Permissive styles were associated with lower grades, and an Authoritative style was associated with higher grades. For the Authoritative style, however, the correlation to grades was positive in seven out of eight ethnic groups except for Asian females. When the strength of correlations were examined, the Asians were the only group to whom the typology applied least well. That is, the correlations of grades with both the Authoritative and the Permissive styles were near zero.

Furthermore, a multiple regression analysis was conducted to assess the relation between grades and parenting styles with the structural variables all taken into account. With the emphasis on structural variables, it was shown that the most powerful ethnic predictor was Asian. This further confirms the conclusion that parenting style does not seem to explain high grades of Asians. Multiple regressions indicate that within the Asian group, Authoritarian parenting was the strongest predictor of grades, but the other parenting indices were not significantly associated with grades. Dornbusch et al. (1987) suggested further investigations on ethnicity, parenting styles and grades.

A follow-up study with 8,000 subjects was done by Dornbusch Prescott, & Ritter in 1986 (1987), as pointed out earlier. Dornbusch, Prescott, & Ritter (1987) analyzed the results of the follow-up study. In this follow-up study, 611 reported speaking an Asian or Pacific language in the home. These languages were Chinese, Japanese, Indochinese (Vietnamese), Filipino, and

Pacific Island.

Dornbusch, Prescott & Ritter (1987) compared the academic performance of bilingual students to 2 groups of Asian students: (1) those who reported speaking only English at home and whose parents do not speak an Asian or Pacific language, and, (2) those who reported speaking only an Asian language in the home. Additionally, they examined the effects of recency of migration and generational differences on Asian- and Pacific-American students' academic performance, effort and self-esteem.

The results of the study were as follows (for the purposes of this literature review, only those results related to Asian Americans will be presented):

(1) Effort: Effort engagement was measured in this study by combining scores for mean homework time, paying attention in class, mind wandering in class, and cutting class, in a four point scale. It was found that effort engagement decreased with generation. That is, first-generation Asian American students engage in the greatest amount of academic effort while third-generation Asian American students engage in the least amount of academic effort.

(2) Self-esteem: The measure of self-esteem was Rosenberg's self-concept scale. It was found that mean self-esteem is greatest among second-generation Asian Americans and lowest among first generation Asian Americans.

(3) Self-reported grades: The students were asked to report their grades on a four-point scale. The findings show

that mean self-reported grades were consistently high over the 3 generations, although there appears to be a decrease of grades from first to third generation. However, this difference was not statistically significant.

(4) Parenting Skills: Three parenting styles were used in this study based on a reformulation of Baumrind's (1972) typology by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987). It was found that the effect of Authoritarian parenting is less negative for first generation Asian American students. Authoritarian parenting is more associated with lower self-esteem and with more effort engagement in the third generation. However, it is more strongly associated with lower grades and less effort engagement in the second generation. Also, in terms of generations, Authoritarian parenting style seems to decrease over generation.

Dornbusch, Prescott and Ritter (1987) examined specific Asian-American groups in terms of effort engagement, self-esteem, self-reported grades, and Authoritarian parenting style. The following results were obtained:

(1) Chinese - Mean effort engagement and Authoritarian style decrease over generation. Mean self-esteem increases across generation. Self-reported grades remain the same across generation. Concerning Authoritarian parenting style, it was found to be significantly associated with lower grades in the second generation, but only slightly associated with lower grades in the third generation.

(2) Japanese - There is an increase of mean effort, self-esteem, and self-reported grades across generation. However, Authoritarian parenting style decreases across generation. In both the first and second generations, Authoritarian parenting style is associated with lower grades.

(3) Koreans - The data were limited to first- and second-generation Koreans because none reported to be third generation Korean. Mean effort decreases across generation while mean self-esteem increases across generation. There were no changes from first to second generation on self-reported grades and Authoritarian parenting style.

(4) Filipinos - There were no third-generation Filipino-Americans in the sample. The findings indicate a sharp decrease from first to second generation of mean effort engagement and grades. Self-esteem increases across generation. The Authoritarian parenting style remains constant across generation. Further, unlike Chinese, Japanese, and Korean students, there is a sharp decrease of self-reported grades across generation.

In general, the effects of the Authoritarian parenting style are less negative in the first generation of Asian American students. In the third generation, it is more associated with lower self-esteem. However, it is more strongly associated with lower grades and less effort engagement in the second generation of Asian American students.

Furthermore, the findings on language use and its impact on effort, self-esteem, and reported grades prove that bilingualism

may increase academic effort engagement and academic success among Asian American high school students. In addition, bilingualism is associated with highest self-esteem in three Asian American groups.

In comparing the two studies on academic socialization and achievement done by Dornbusch and his colleagues, the results present an apparent contradiction with regard to parenting style and achievement. In the original study, it was found that within the "Asian" group (the groups were not specified), Authoritarian parenting was the strongest predictor of grades, although the other parenting indices were not significantly associated with grades.

In the follow-up study, the effects of Authoritarian parenting are less negative in the first generation of Asian-American students, but more strongly associated with lower grades in second-generation Asian-American students. It is noteworthy, however, that there is a stronger relationship between Authoritarian parenting and lower grades among second-generation Filipinos unlike their Chinese, Japanese and Korean counterparts.

Whereas the results may be inconclusive due to methodological differences in the two studies by Dornbusch and his colleagues, these findings are significant for the purposes of the present study. This research can be viewed as an exploratory attempt to clarify the relationship between academic socialization and achievement in Filipino adolescents.

Although not directly patterned after Baumrind's (1966,

1967) parenting typology, there was another study that examined parenting styles and academic success in adolescents. This was done by Steinberg, Elmen and Mounts (1989). This study had three objectives, namely: (1) to examine the three components of Authoritative parenting (i.e., acceptance, psychological autonomy, and behavioral control) and the contribution of each component to adolescent school achievement; (2) to examine the over-time relationship between the three components of Authoritative parenting and school achievement, and to specifically test the hypothesis that Authoritative parenting facilitates academic success, and, (3) to examine the processes that may link Authoritative parenting and academic success, particularly that of adolescent autonomy.

The sample of the research by Steinberg and his colleagues consisted of 120 families from the Madison school district in Wisconsin. There were three steps in the selection of this sample. Nearly 900 adolescents were surveyed in their classrooms. Then this group was narrowed down to 157 families with firstborn adolescents who were surveyed in their houses two times, one in 1985 and another in 1986. But only 120 of these adolescents had data on achievement-test scores. Thus, the final sample was limited to this number.

The sample had an equal number of males and females, largely White, from a diverse socioeconomic background, with a variety of family structures and different maternal work patterns. The adolescents were interviewed in their school and at home from

April to June, 1985 and a year later. They were also asked background information on their parents' occupation as a measure of socioeconomic status and of their household composition as a measure of family structure.

The instruments used for the variables studied included the following: (1) Children's Report of Parental Behavior Inventory (CRPBI) - for Acceptance and Psychological control subscales to indicate scores on Acceptance and Psychological autonomy; (2) a checklist of 17 areas on family decision making on issues relevant to children - for a score on behavioral control following the scoring by Dornbusch et al. (1985, as cited by Steinberg, 1989) and Steinberg (1987, as cited by Steinberg, 1989); (3) Psychological Maturity Inventory, Form D (from Greenbeger, Josselson, Knerr & Knerr, 1974, as cited by Steinberg, 1989) - for psychosocial maturity measure, 3 subscales were used: Work Orientation, Self-reliance, and Identity; (4) school grades - for academic achievement, the average of all English and Mathematics grades for a given year was used to yield a GPA on a 4-point scale; (5) California Achievement Tests - the average of verbal and mathematics scores in this test was used for analysis.

A multiple regression technique was the statistical procedure employed in this study. The data were analyzed using a series of path models with simultaneous regression analyses. More specifically, it examined the relationship between parenting practices and the 1986 school performance, while at the same time

controlling for the effects of the 1985 school performance.

The results of the study showed that there is a significant relationship between the 1985 and 1986 school performance. Further, the findings indicate that all three components of Authoritarive parenting lead to increases in school grades. More specifically, higher grades are shown by adolescents whose parents give them greater psychological autonomy, firmer behavioral control and higher acceptance.

It is noteworthy, however, that while there is both a direct and indirect effect of Psychological Autonomy on subsequent school success, there is no indirect effect of parental Acceptance and Firm Control on the 1986 school grades. The results also confirmed the hypothesis that Psychosocial Maturity mediates the effects of Authoritative parenting on school success.

Regarding the direction of effects, there was the possibility that emotionally-mature adolescents elicit more positive behavior from their parents. An analysis was done in order to rule out this possibility. The results support the hypothesis that Authoritative parenting enhances the adolescents' psychosocial development. This, in turn, leads to academic success.

Concerning how Psychological Autonomy links Authoritative parenting and school success, it was found that Work Orientation is the psychosocial process/mechanism through which Authoritative parenting affects school success. In other words, the three

components of Authoritative parenting enhance the adolescents' Work Orientation which in turn contributes to school success.

Steinberg et al.'s study (1989) confirms the general findings about the positive relationship between Authoritative parenting style and achievement. However, as the authors pointed out, the subjects of the study consist mainly of White students; thus, the issue of the cross-cultural generalizability of its conclusions has to be addressed.

2.4. Ethnicity and Achievement

As has been consistently emphasized in the present study, the ethnic background of the subjects is a significant variable in the study of achievement. Closely-related to one's ethnicity is one's family structure, dynamics and relationships and how they influence an adolescent's school performance.

This section will present two comprehensive studies on ethnicity and achievement in the United States. The first one is an extensive literature review on achievement and the families of Asian- and African-Americans by Slaughter-Defoe, Nakagawa, Takanishi & Johnson (1990). The second one is a detailed study by Hsia (1988) of Asian-American abilities based on national educational surveys. In addition, a study of Chinese-Canadian adolescent achievement by Mak (1988) will also be discussed.

An extensive review of literature on Asian American families and achievement was done by Slaughter-Defoe, Nakagawa, Takanishi, & Johnson (1990). This review was conducted with the purpose of

comparing Asian-American and African-American schooling and achievement and pointed out a troubling stereotype in the research on educational achievement of the two minority groups. This stereotype refers to a prediction of educational failure for African Americans and educational excellence for Asian Americans. (For the purposes of the present study, only the section on Asian American review of the literature will be presented below. Also, the references were all cited in Slaughter-Defoe et al.'s study).

The literature review was divided into two periods, research in the 1970's and 1980's. Most of these studies deal with Japanese Americans as well as those that have combined other Asian groups such as Chinese, Japanese, Koreans, Filipinos, Asian Indians, and Vietnamese into one term "Asian American".

In terms of demographic data, Kitano & Daniels (1988) used 1980 census data comparing Blacks, Hispanics, Whites and Asian Americans. The ages range from 25-29 and 45-54. These census data showed that all Asian males, except for Vietnamese, are either equal to or above the percentage of White males graduating from high school. This figure is 87% or better.

Further, the highest rates of high-school completion were obtained by the Japanese and Korean groups. In terms of male versus female comparison, there were more males who finished high school except among the Japanese- and Filipino-Americans. Also, there were more high school graduates among the younger immigrants.

Slaughter-Defoe et al. identified fewer than 25 published

articles through PsychScan, Sociological & Child Dev't Abstracts, and ERIC for 2 periods: 1970's and 1980's. Three important points were noted in this literature review:

(1) There were very few studies on pre-adolescent children. There were only six studies that included elementary school-aged children or middle-school-aged children. The rest were on high-school aged students or adults.

(2) Researchers have not looked at the diversities of Asian American families. Single parent families may not have been considered and 10% of Chinese, Japanese, Filipino, Korean, and Vietnamese families in 1980 had single mothers as the head of the family. Also, Asian-American groups differ in several ways based on their generation aftr immigration. For instance, the language abilities and socio-economic status (SES) of American-born Asians may differ largely from those of recent immigrants.

(3) The methodology used in the research of Asian Americans has not varied much from 1970 to 1980. Asian Americans have various differences, yet research has concentrated on the successful achievement of this group. Only one study was identified by Slaughter-Defoe and his colleagues to include lower-achieving Asians. This study was done by Onoda in 1976.

The authors concluded their review with several research and policy implications. The main focus, though, is the need to consider and emphasize <u>cultural/ecological theories of achievement socialization and development</u>.

The second study to be cited is a detailed study of Asian

American abilities and achievement done by Hsia (1988). The findings of this study were based on national educational surveys, namely: Project TALENT (Backman, 1972), the Equal Educational Opportunity Survey (Coleman et al., 1966), National Longitudinal Study (Taylor, Stafford, & Place, 1981), and High School and Beyond (Peng, Owings, & Fetters, 1984; Rock, Ekstrom, Goertz, & Pollack, 1985; Rock, Ekstrom, Goertz, Pollack & Hilton, 1984).

Hsia reviewed these surveys and concluded that the results of these studies were consistent in showing that Asian Americans performed differently from Whites and all other minority classmates. More specifically, Asian Americans have lower verbal abilities but higher mathematical abilities than their White counterparts, although their performance in verbal ability is about the same as the general student population and their mathematical abilities are consistently higher than other minority groups.

In Project TALENT survey of 1960, 4.5% of high school students were included in the sample. Out of 2,925 respondents in the 5-year post graduation follow-up survey, 150 were Asian Americans representing roughly 5% of the sample. Comparisons were done among 4 ethnic groups: Jewish & nonJewish Whites, Blacks, & Orientals, and 2 socioeconomic groups, upper and lower middle class. The results of the survey indicate that mean Oriental mathematics scores were higher and verbal knowledge lower than mean White scores.

The Equality of Educational Opportunity survey was conducted by the National Center for Educational Abilities in 1965. The sample in this survey comprised selected students in 5% of the public schools. The sample was stratified such that there were 40% minorities of the total 650,000 students studied.

Moreover, the test scores were scaled revealing a mean of 50 and a standard deviation of 10. There were 1,000 Asian American students in the sample. They had a mean verbal ability score of 49.6 and nonverbal ability score of 51.6, lower than the scores of their White classmates, but close to the average of all public school seniors.

Hsia also examined the Scholastic Aptitude Test scores in 1972 and 1983 of Asian Americans. The results confirm the findings of Project TALENT and Equality of Educational Opportunity Survey, that is, in verbal ability, they were below White mean scores, although close to the average of all seniors, and in mathematical ability, slightly above the mean of White students, and about a third of a standard deviation above all seniors.

In the National Longitudinal Study of 1972, the sample consisted of 16,683 out of 3 million seniors. There were 193 Asian Americans in the study out of a total of 27,740 Asian-American seniors, or almost 1% of the nation's 1972 seniors. Again, the mean score of Asian Americans using the Item Response Theory (IRT) for each of the 3 cognitive tests, namely: vocabulary, reading and math, were higher than the total-senior-

average scores. Also, their mean score in mathematics was higher than their White classmates but their mean scores in vocabulary and reading were lower than their White classmates.

The High School and Beyond Study began in 1980 and allowed time-lag comparisons between high school seniors in 1972 and 1980. There were 320 Asian Americans who participated in this survey. This represents 1.3% of the total sample. The average scores in the 1980 study were lower than in the 1972 study.

The time-lag differences were significant for Total and White seniors. Although the size of Asian-American difference was the same as White and Total differences, their sample size was too small to determine statistically significant differences between the mean scores of the 2 cohorts.

According to Hsia, the data from these studies indicate that the test scores prove that Asian Americans have the ability for college work. However, those with limited English proficiency would need assistance in the development and remediation in English communicative skills in order to succeed in subjects that require high level of verbal abilities.

A study that is pertinent to the purposes of this study because of its Canadian sample was done by Mak (1988). In this research, 605 adolescents, 13 to 18 years of age, from three cultural groups - Hong Kong Chinese (HK), Chinese-Canadian (CC) and Euro-Canadian - were investigated in view of their achievement behavior.

The Hong Kong-Chinese sample consisted of students attending summer school, youth centers, and the Boy Scouts Association in Hong Kong who were all born and raised in Hong Kong. The Chinese-Canadian sample were students from the suburban areas of Greater Vancouver in British Columbia, Canada. Most of these students were born and raised in Canada and their parents were Chinese who were born and raised in China or Hong Kong. The Euro-Canadian sample comprised students from four schools in a rural school division in north-western Manitoba. Although 60% of this sample was of Ukrainian origin, the author pointed out that the Euro-Canadian sample was as a result of necessity rather than choice because she did not get the permission to perform data-collection in the urban school divisions in Winnipeg.

The independent variables in Mak's (1988) study were ethnicity (the three groups specified above), gender and age group differences (younger versus older adolescents). The dependent variables and the instruments used to measure them were:

(1) Socialization practice - These included the adolescents' perception of maternal and paternal Acceptance, maternal and paternal Psychological Autonomy, and maternal and paternal Firm Control as measured through Schludermann & Schludermann's (1970) Children's Report of Parental Behavior Inventory.

(2) Locus of Control - These were Internality and Externality as measured through Wong, Watters and Sproule's

(1978) Trent Attribution Profile.

(3) Causal Attribution - This variable referred to the degree of attributing self-success, self-failure, other-success, and other-failure to Ability, Effort, Luck and Task Difficulty.

(4) Adolescent's Perception of the Certainty or Uncertainty of their Future - There were four areas examined: certainty of attaining occupation ten years from the present, expectation of social and political changes ten years from the present, considering the political changes in future-planning, and the degree that social-political changes have affectd overall future-planning. A questionnaire was developed for this purpose called " A Questionnaire on Adolescent Perception of the Certainty of their Future".

(5) Adolescent Perception of the Importance of Family Honor - This perception was measured through the "Questionnaire on the Perception of the Importance of Family Honor".

(6) Achievement behavior - This behavior was operationalized as minimal standard, level of aspiration, expectancy and realism in expectancy estimates. Achievement behavior was measured through a test where the subjects copied two solvable and two unsolvable puzzles, each in four minutes.

The results of Mak's study revealed that the Chinese groups reported less parental Acceptance and more Psychological Control than the Euro-Canadian group. Further, most adolescents had a bilocal Locus of Control, i.e., a combination of internal and external loci.

Also, the Chinese groups attributed other-success to Ability and the Euro-Canadian group to low Task Difficulty. The group that perceived Family Honor as most important was the Chinese-Canadians, followed by the Euro-Canadians, and lastly by the Hong Kong Chinese.

In addition, the perception of social-political changes were expected most by the Hong Kong-Chinese Canadians, intermediate by the Euro-Canadians, and least by Chinese-Canadians. The Hong Kong-Chinese group also set the highest Minimal Standard, Level of Aspiration, and Expectancy in Achievement tasks than the Canadian groups. Males and older adolescents showed higher achievement-oriented tendencies than females and younger adolescents, respectively.

These three studies confirm the need to consider ethnic differences in adolescent achievement. The present study focuses on a specific immigrant group, the Filipinos. Although this group was not compared to another group, the study is an in-depth ethnic study in that the sample is large and represents two North American places, Canada and the U.S. Thus, it is an answer to some of the issues raised by Slaughter-Defoe et al. (1990). The use of a Filipino-Canadian sample is also a contribution to Canadian ethnic research and may be examined in view of some of the results provided by Mak (1988) in her study of Chinese-Canadians.

2.5. Gender Differences in Achievement

The results of studies on gender differences in achievement are inconclusive. Gender differences may not exist if some factors are controlled such as the age of subjects (Entwistle, Alexander, Dallas & Cardigan, 1987; Fennema & Sherman, 1977,1978; Sherman & Fennema, 1977; Stein & Smitchells, 1969), type or area of achievement task (Eccles, Adler & Meece, 1984; Lenney, 1977; Meece & Parson, 1982) and beliefs/values on the gender-appropriateness of the task (Stein & Bailey, 1973).

2.5.1. Age and Gender Differences in Achievement

Some studies suggest that gender differences in achievement decrease as age increases (Entwistle, Alexander, Pallas & Cadigana, 1987; Stein & Smitchells, 1969). Stein & Smitchells examined age and gender differences in children's gender-role standards about achievement. One hundred and twenty children in a public school from grades 2, 6 and 12 participated in this study. They were asked to rate the following areas as "feminine" or "masculine": athletic, spatial and mechanical, arithmetic, reading, artistic (including art and music), and social skills. Elementary-school students were shown photographs depicting these activities together with verbal descriptions, while high school students were given verbal descriptions in writing.

The analysis of variance demonstrated significant differences among achievement areas. That is, the predominantly "feminine" areas, i.e., social, artistic and reading, were each

significantly different from the predominantly "masculine" areas, i.e., athletic, spatial and mechanical and arithmetic.

In addition, social was rated significantly more feminine than reading. Also, arithmetic was significantly less masculine than both athletic and spatial and mechanical. The order in which areas were ranked as masculine was athletic, spatial and mechanical, arithmetic, reading, social, artistic. On the other hand, the order in which areas were ranked as feminine was artistic, social, reading, arithmetic, athletic, spatial and mechanical.

Concerning age and gender differences, interaction of the two variables showed that as age increased, gender differences decreased. The gender difference was greatest at the second-grade level, intermediate at the sixth-grade level, and negligible at the twelfth-grade level. Significant gender differences were found in only two areas: athletic and reading.

Gender x Age interaction clarifies the meaning of these differences. In athletic skills, the femininity ratings of athletic skills made by younger girls were relatively high and decreased with age, while the ratings by boys were low at all ages. In reading, the girls' femininity ratings were high in all groups and increased slightly, although nonsignificantly with age. However, the boys' ratings were quite low in the second-grade group and increased markedly with age. These results indicated that gender differences in achievement occurred in younger age levels.

Similar results were found in the children's academic self-image. Entwistle, Alexander, Pallas and Cadigan (1987) investigated the academic self-image of first-graders as affected by race, parent background and gender, and as it affects academic achievement.

The subjects consisted of 673 children selected randomly from 20 Baltimore City elementary schools as well as their parents and teachers. The data were collected from parents, students and teachers separately according to different schedules corresponding with the model used in the study. That is, parents were asked their expectations of their child's school performance early in the fall, students were asked the same thing later in the fall, and the teachers rated the students' peer popularity in March and answered 14 personal-maturity questions about the students in June.

The students' self-image was measured through Dickstein's (1972) test. In addition, school marks, absences, problem-referral records, and CAT scores for the beginning and end of the year were obtained from school records after school closed for the summer.

The results were analyzed by collapsing the model into three blocks. The first block contained variables present when the school year begins and early in the school year. The second block had variables present in the latter part of the year, and the third block adds body image as another variable of self-image.

The Gender of the child was found to be an important

predictor of academic self-image. More specifically, the girls' images strongly reflected stereotypic gender-role notions. In contrast, the boys' images reflected instrumental role concerns. The girls in this study seem to go about the task of constructing an academic self-image differently from the boys. The girls' self-image revolves around issues of interpersonal relations (i.e., significant others such as peers and parents are important in their fall expectations and their parents continue to be important in their expectations during spring).

Furthermore, they do not consider their ability in mathematics relevant to their self-image, even though they did equally well as boys in mathematics and were exposed to the same kinds of mathematics instructions as boys. On the other hand, the boys are concerned with the instrumental parts of the student role.

Moreover, their academic self-image depends, not on parental evaluations, but on self-evaluations. That is, early in the year, self-evaluations are important and parents' conduct expectations have a negative relation with their academic self-image. Self-evaluations become more important as the year goes on. Also, absence is significant and the third quarter math mark is significant. Adding body image as a variable does not have any effects on academic self-image.

2.5.2. Ability Area and Gender Differences in Achievement

Mathematics is an area where it is assumed that gender differences exist. Males are believed to be better in mathematics than females (e.g., Geennon & Callahan, 1968 in Fennema & Sherman, 1978). Recent research, however, suggests that gender differences in mathematics achievement are not as prevalent as people thought but that they are age-related (Fennema & Sherman, 1977; Fennema & Sherman, 1978; Sherman & Fennema, 1977).

Fennema & Sherman (1978) concluded on the results of their earlier studies in 1977 that gender differences in mathematics achievement are age-related. In this study, two cognitive variables and eight affective variables were examined in addition to mathematics learning.

The cognitive variables were computational skill, knowledge of concepts, problem-solving ability, verbal ability and spatial visualization. The affective variables included attitude toward success in mathematics; the stereotyping of mathematics as a male domain; the perceived attitudes of mother, father and teacher toward one as a learner of mathematics; affective motivation in mathematics; confidence in learning mathematics; and, usefulness of mathematics.

The subjects were 1,320 6th-8th graders in middle schools in Wisconsin. These schools were feeder schools for the four high schools studied the year before. Most students were White and

included diverse socioeconomic backgrounds although predominantly middle class. In two 2-hour sessions or 3 shorter sessions, the subjects were given tests in the following order: Romberg-Wearne Problem Solving Test, vocabulary test from the Verbal Battery of the Cognitive Abilities Test, Space Relations Test, Mathematics Concepts Test, Mathematics Computation Test, and Fennema-Sherman Mathematics Attitudes Scales.

An analysis of variance was performed on each variable with gender, grade and area used as sources of variance. The results showed significant gender differences for only two affective variables, namely: Confidence in Learning Mathematics and Mathematics as a Male Domain. That is, males were significantly more confident of their ability to learn mathematics than were females and they stereotyped mathematics at higher levels than did females.

Furthermore, the gender-related differences varied according to high school area. Significant gender-related differences were demonstrated in each area for Mathematics as a Male Domain. The only other significant difference was Computation in favor of females in Area 4, except for Area 3.

These results suggest few gender-related differences in mathematics learning. The authors conclude that when relevant factors are controlled, gender-related differences in mathematics achievement in grades 6-12 do not appear often, and when they do, they are not large. When variables are controlled, the gender differences are few and of slight extent.

Possible explanations for this misconception on gender differences in mathematics was addressed by Meece and Parsons (1982). The authors summarized studies done on mathematics enrollment patterns of males and females, but noted a lack of integrative theoretical framework. They proposed a model linking academic choices to expectations of success and to the subjective value of the task.

The factors contributing to gender differences in mathematics course enrollment can be generally classified into two: biological and socialization. There are three assumptions on the conclusion that biological factors determine course enrollment:

(1) Consistent gender differences on measures of mathematics ability exist.

(2) These differences are due to biological reasons.

(3) As a consequence of these gender differencess in math aptitude, students decide to enroll in mathematics or enter mathematics-related professions.

Socialization factors, on the other hand, account for gender differences in terms of the socializers' contributions as follows:

(1) Male and female socializers have various attitudes and behavior toward mathematics resulting in differences through their authority as role models.

(2) Socializers communicate directly and indirectly their different expectations and goals for boys and girls.

(3) Socializers provide or encourage various activities for their male and female children which in turn, train them differently in their skills and interests.

Meece and Parsons' (1982) review showed a fairly consistent evidence of gender differences in tests of both mathematical and spatial skills among 11th and 12th graders. However, biological influence on the development of spatial skills is not conclusive (Vandenberg & Kuse, 1979 in Meece & Parson, 1982).

Some studies indicate that spatial skills can be trained (e.g., Burnett & Lane, 1980; Connor et al., 1977, 1978; Goldstein & Chance, 1965). Also, the relationship between spatial skills and mathematics learning is not clear. Moreover, it is unclear whether gender differences in spatial skills or mathematics aptitudes contribute to gender differences in course enrollment patterns.

Sometimes spatial skills are an important predictor of mathematics enrollment, as shown in a few studies examining this area. But this finding is not always the case. Mathematics enrollment is also affected by the following: vocabulary tests, past mathematics achievements (Sherman & Fennema, 1977; Armstrong, 1980), interest in mathematics and career plans (Steel & Wise, 1979), and a variety of attitudinal and social factors. Thus, there is no conclusive evidence on the magnitude and exact nature of the effects of biological factors on mathematics enrollment.

With regard to socialization factors, the studies reviewed

by Meece and Parsons (1982) confirm the hypothesis that boys and girls are treated differently in ways that might affect mathematics achievement and course selection. Among the few studies done that directly measured the relationship between socialization experiences and students' mathematics achievement and course selection, the findings demonstrated that encouragement from parents affects the girls' decision to choose mathematics courses in high school (e.g., Haven, 1971; Sherman & Fennema, 1977).

Meece and Parsons also cited their own studies where they found similar results, i.e., there was a strong relation between parental perceptions and expectations and their children's plans to continue taking mathematics courses. In contrast with other studies, though, the boys were favored and the boys seemed to influence the girls' choices negatively.

It is noteworthy, however, that the direction of causality in these studies is not certain. It is possible that the causal relationship between the socializers' expectations and attitudes and actual student achievement differences is two-way. Cramo and Mellon (1978), for instance, found the teachers' expectations to cause the students' academic performance. On the other hand, West and Anderson (1976) showed that student achievement causes expectations. Although both conclusions can be correct, future research is needed to clarify this issue.

2.5.3. Socialization and Gender Differences in Achievement

Although gender differences may not be observed in younger children and adolescents, females in adulthood show lower levels of achievement than males. Stein and Bailey (1973) reviewed articles supporting this contention and explored factors affecting females' achievement orientation particularly those of socialization factors.

Concerning gender role effects on female achievement strivings, the findings reviewed by Stein and Bailey confirm their prediction that females' achievement orientations tend to be expressed in areas which represent culturally defined gender-appropriate activities. In particular, adult women consider social skill as the most important area of achievement. Moreover, females develop values and standards in gender-appropriate areas which in turn influence their effort and performance.

Finally, when the content of a task is feminine, the females' performance is better than when the content is masculine. Social skill has always been interpreted in terms of females' affiliation motives or desire for social approval per se.

Stein and Bailey (1973), however, reviewed studies of the hypothesis that social skills are a central area of concern for many females. Thus, the females' goal is attainment of a standard of excellence although the areas in which such attainment is important are not necessarily the same as males.

It is also interesting to note that there are individual differences among women in patterns of integrating achievement orientation and femininity. Some women have developed ways by which to resolve or reduce conflict between achievement striving and adherence to a traditional feminine role. Females who are high achievers define achievement as being more feminine than those who have lower achievement motivation.

In addition, those with high achievement motivation in masculine areas have relatively high masculine role-identification, although not necessarily low identification with the feminine role. Further, females can partially satisfy their achievements vicariously through the achievement of a husband. Moreover, gender-role conflict can be avoided by choosing a feminine career area.

In regard to female patterns of achievement-related characteristics, Stein and Bailey (1973) concluded from studies done that females are more anxious about failure, more cautious in risking failure and more likely to assume responsibility for failure when it occurs than is the case for males. Moreover, even if their work is identical with males, females have lower expectancies of success which are usually perceived as an indication of less competence than males. Also, females show as much effort and learning as males do in a task involving failure rather than a choice of tasks.

In relating socialization practices with female achievement behavior, it was concluded that child-rearing practices that are

conducive to gender typing are often antagonistic to those that lead to achievement-oriented behavior. Socialization practices that promote achievement behavior include moderate Warmth, moderate to high Permissiveness, reinforcement and encouragement of achievement efforts as well as moderate Punitiveness, high demands on the child and acceleration attempts by the mother. In most instances, the reverse of these practices leads to high femininity.

An aspect of socialization which supports Stein and Bailey's (1973) conclusions looks at the gender-role identification of adolescents and its relationship to school achievement. Hock and Curry (1983) employed 45 adolescent males and females from a junior high school in North Carolina for their study. The participants completed a modified version of the Gender-Role Questionnaire (Rosenkratz et al., 1968, cited in Hock & Curry, 1983). Their school records were reviewed and five subtest scores from the California Achievement Test were obtained.

An interesting finding related to achievement was that perceived similarity to fathers of female adolescents was associated with increased school achievement for spelling proficiency and total battery on the California Achievement Test. This relationship was not found for males. Neither was it found for either male or female adolescents for the variable of similarity to mothers. This implies that females who identify with their fathers and imitate them will also show enhanced academic achievement. Family processes are seen to be

significant in developing achievement among adolescents both in terms of parenting practices and identification with parents.

To summarize, there are several variables that may account for gender differences in achievement when they exist. These include age of the subjects, the type of achievement task, and the values given by the subject on achievement as a result of socialization. These studies are based mainly on White samples and so far, there have been very limited ethnic studies to show these gender differences in achievement.

2.6. A Summary of the Empirical Studies on Adolescent Academic Achievement

The empirical studies presented in this chapter may be summarized below. This summary was presented according to the effects of the five variables of achievement discussed above:

1. Causal attribution was found to be directly related to achievement. Weiner & Kukla (1970) showed that achievement is positively associated with the amount of effort exerted, but inversely related to the level of ability. These findings were replicated by Rest, Nierenberg, Weiner & Heckhausen (1973) and Kun & Weiner (1973). McMahan (1973) further studied attribution as it relates to expectancy of success and confirmed that attribution to stable factors is positive following success and negative following failure.

There was also cross-cultural support provided for Weiner's (1986) theory as shown in the studies of Kojima (1984), Chandler,

Shama, Wolf, & Planchard (1981). Moreover, attribution studies supportive of Weiner's theory were done on Filipino adolescents by Watkins (1982b) and Watkins & Astilla (1980b, 1984).

(2) Concerning general parenting practices, studies demonstrate that Parental Warmth/Acceptance operates differently upon the achievement orientation of boys and girls. More specifically, high Maternal Warmth is positively associated with strong achievement orientation in boys while moderate maternal Warmth is related to strong achievement orientation in girls (Abrahamson, 1977; Bayley & Schaefer, 1964; Crandall & Battle, 1970; Crandall, Dewey, Katkovsky & Preston, 1964; Crandall, Preston & Rabson, 1960; Douvan & Andelson, 1966; Kagan & Freeman, 1963; Kagan & Moss, 1962; Rosen & D'Andrade, 1959; Solomon et al., 1971; Winterbottom, 1958).

Regarding Permissiveness, it was demonstrated in general to have a positive influence on children's achievement (Hess & McDevitt, 1984; Banner, 1979; Douvan & Adelson, 1966; Kagan & Moss, 1962; Nuttall & Nuttall, 1976). However, some variables such as parental Warmth/Acceptance (e.g., Becker, 1964) or high demands on the child (e.g., Baumrind, 1971) are important additional factors.

(3) With respect to Academic Socialization, studies give evidence to the effectiveness of Authoritative parenting. In general, Authoritative parenting seems to be the most favorable type of parenting (Baumrind, 1967, 1971; Baumrind & Black, 1967; Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987;

Steinberg, Elmen & Mounts, 1989). However, the results of two studies using Asian-American samples are inconclusive, that is, one study showed Authoritarian style to be a predictor of good grades among Asians (Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987) and another study showed Authoritarian style to be negatively related to high grades in second-generation Asian-Americans (Dornbusch, Prescott & Ritter, 1987).

(4) Several studies indicate Ethnicity as an important variable in achievement. Hsia (1988) demonstrated the differences among Asian-American abilities as shown in extensive national surveys of Asian-Americans. However, the literature on this area is scarce and needs to address several issues on ethnicity and achievement (Slaughter-Defoe, Nakagawa, Takanishi, & Johnson, 1990). Although the findings on this area are inconclusive, it is noteworthy that Mak's (1988) research confirms the cultural factors of achievement among Chinese-Canadians.

(5) The results of studies on Gender Differences in achievement are not conclusive. Gender differences may exist if some factors are controlled. These include: the age of subjects (Entwistle, Alexander, Dallas & Cardigan, 1987; Fennema & Sherman, 1977, 1978; Sherman & Fennema, 1977; Stein & Smitchells, 1969), the type or area of achievement task (Eccles, Adler & Meece, 1984; Lenney, 1977; Meece & Parson, 1982), and beliefs/values on the gender-appropriateness of the task (Stein & Bailey, 1973).

CHAPTER 3: THE FILIPINO COMMUNITY: HISTORY, VALUES AND ADOLESCENT ACHIEVEMENT

In order to have a clear understanding of Filipinos in the San Francisco Bay Area and Winnipeg, it is important that this group be viewed in the context of Filipinos in general. This section will present a historical background of Filipinos in North America, when and how they came to the United States and Canada, and what their characteristics are. Thereafter, the Filipino family values both in the Philippine setting and in the North American setting will be discussed. The last section is on Filipino adolescents and academic achievement. Most studies mentioned were done in the Philippines, because studies of the Filipino community in North America are scarce.

3.1. The Historical Background of Filipinos in North America

Phenomenal numbers of Asian immigrants have been arriving to the United States for the past two decades. In the United States, immigrants of Asian ancestry constitute a large proportion of the total immigrant stream ranking next to immigrants of Hispanic origin (United States Bureau of the Census, 1992, p. 17). Among Asian immigrants, the Filipino Americans total 1,407,000 and trail Chinese Americans by less than 138,000 (United States Bureau of the Census, 1992, p. 21). Further, the largest Filipino immigrant population in the United

States is found in the San Francisco Bay Area (San Francisco Chronicle, 2-10-93).

There were three immigration waves of Filipinos in the United States. These immigration waves may be divided into three periods: the first wave from 1906-1945, the second wave from 1946-1964, and the third wave from 1965 to the present (Brett, 1977; Crouchett, 1982; Mangiafico, 1988; Stern, 1989).

Most of the first-wave immigrants were single males between the ages of 20 and 29. These immigrants were usually less educated and worked in the sugar plantations of Hawaii. They later moved to the West Coast to work in the farms or hold domestic and personal-service jobs (Mangiafico, 1988; Crouchett, 1982).

The second wave of Filipino immigrants to the United States started in 1946, following Philippine independence in 1946. Several factors accounted for immigration during this period. One was the Nationality Act of 1946 signed by President Truman which allowed Asians to be naturalized. Thus, Filipinos became United States citizens and later petitioned their family members (Mangiafico, 1988). Another was the War Brides Act that enabled Filipinos who were enlisted in the United States Armed Forces to bring their wives from the Philippines (Crouchett, 1982). In addition, there were two United States bases established in the Philippines which resulted in the United States servicemen's marriage to Filipino women and the latter's immigration to the United States (Mangiafico, 1988). The postwar immigrants

consisted of more females as well as more skilled and professional workers than the first-wave immigrants.

In 1965, the Immigration and Nationality Act opened immigration doors to citizens of all countries. As a result, the influx of Filipino immigrants was sustained. The third-wave immigrants were mostly educated professionals including nurses, doctors, teachers, engineers, and accountants. Further, these immigrants were different from the first wave of single young men. Instead, they consisted of families who were the spouses, unmarried children, parents and siblings of United States citizens (Carino, 1987; Medina, 1984; Stern, 1989). They belonged to various age groups and diverse educational backgrounds.

According to the United States 1992 Census, more than half of Filipino immigrants are in the West Coast, i.e., 70.5% (United States Bureau of the Census, 1992, p. 21). Currently, as mentioned earlier, the largest group of Filipino immigrants in the United States are in the San Francisco Bay Area (San Francisco Chronicle, 2-10-93).

Despite the higher educational level of Filipino Americans, however, their socioeconomic status is lower than the mainstream population. One detailed study reveals empirical support for the economic inequality of Filipino immigrants in California as shown in their income and occupation. Cabeza, Shinagawa and Kamaguchi (1987) compared Filipinos in the San Francisco Bay Area and Los Angeles with the White population and found that Filipinos had a

lower income and occupation status than their White counterparts.

Furthermore, when compared with other Asians such as the Japanese and the Chinese, Filipinos seem to be more of a working class group with a concentration in semi-skilled jobs (Fujii & Mak, 1984; Nee & Sanders, 1985). Filipinos appear to remain a disadvantaged minority group in the United States with negligible returns to education, a comparatively low mean income, and a concentration in occupations that give this group a distinctly working class character.

Although Filipino immigration to Canada started later and was smaller than in the United States, similar increasing trends are seen (Hawkins, 1974). Asians rank first among the immigrants who came to Canada between 1981 and 1991 constituting almost half (48%) of these recent immigrants (Statistics Canada: 1991 Census of Canada, 1992, p.1). The 1993 Census of Canada reports a total of 157,250 immigrants from the Philippines in 1991 (p. 20).

In Manitoba, the Filipino population is estimated to be 27,650 as of 1986 (Buduhan, 1986). Its profile can be described as follows: 1962-1968: 150 doctors, nurses and teachers; 1968-1975: 2,500 garment workers; 1972-1980: 5,000 sibling-sponsored relatives; 1975-1986: 15,000 family-sponsored dependents; 1970-1980: 5,000 Winnipeg born children.

The immigration of Filipinos in Canada started only in the 1960s. This was due to Canada's earlier immigration policy that was characterized by an expressed preference for White immigrants

(Hawkins, 1974). The earlier wave of Filipino immigrants to Canada (i.e., in the sixties) consisted largely of females in the 20-29 age group. This is probably due to individual immigration that occured earlier (e.g., nurses).

In contrast, the latter wave, particularly towards the mid-seventies, had a greater proportion of both the very young (0-19 years old) and the very old (50-70+ years old). Family immigration was prevalent during those times as is evident in the sponsorship of elderly parents and siblings/relatives with young children. In Manitoba, although the females are equally represented as the males in terms of proportion, the total number of females in the mid-eighties are estimated to be actually fewer than the males (Buduhan, 1986).

3.2. Filipino Values

Three important Filipino values are family cohesiveness, authoritarianism, and emphasis on education. These will be discussed below.

3.2.1. Family Cohesiveness

In terms of family structure (i.e, size and type), families in the Philippines can be classified as either nuclear or extended. According to family composition, a "nuclear" Filipino family consists of the husband, the wife and any unmarried child regardless of age (i.e., the child may be 30 years or older). This is in contrast with Americans with whom children 18 years of

age or over are usually classified as adult relatives (Castillo, Weisblat & Villareal, 1968).

In studying family structures, Castillo and her colleagues defined extended family as a household which includes relatives other than the husband, the wife and unmarried children. In this study, they reviewed and analyzed ten investigations on household composition in the Philippines. The places studied represented both rural and urban areas.

The data revealed a much lower percentage of extended than of nuclear households, except in the case of Malate, Manila - a district which had a larger representation of families in the middle-and-upper-income ranges. The trend for more extended households in higher income and more urbanized areas was accounted for by the authors in two ways: (1) the possibility that the urban families were economically better off than their rural relatives and, thus, the rural relatives tended to be close to their affluent relatives; and, (2) the possibility of rural relatives going to the city to work or study, and, thus, staying with relatives in the city. Another explanation was that it was not as easy in the cities as in the rural places to put up separate dwellings because of the high cost of housing.

A more recent study of family structure in the Central Philippines demonstrated similar findings. Yu and Liu (1980) took a random sample of households in Cebu, the biggest city in Central Philippines and second to Manila in the whole of the Philippines. It was found that about two-thirds of all families

are nuclear households.

Moreover, the highest proportion of nuclear families is found in the rural lower-class category. In other words, extended households are observed among more affluent members of the kin. These findings are similar to the study of Castillo and colleagues (1968) cited earlier.

Household separateness, however, does not mean a severance of relationships with kin outside of the household. In fact, reciprocal family obligations are maintained. The nuclear household is not at all free from reciprocal obligations of extended-family norms, despite its domestic separateness.

Inspite of the primary nuclearity of Filipino families in the Philippines, relations with extended family members are kept and continuously strengthened. The Filipino family traces its kinship descent through both maternal and paternal sides of the family and thus, the individual household is really just a subunit of the extended kin group consisting of persons related to them through both parents and through marriage (Almirol, 1982; Carroll, Araneta, Arnaldo & Keane, 1970). Loyalty and unity are expected of the family members. The Filipino's social status is most closely tied with one's capacity to maintain family harmony, improve its economic position and safeguard the women kin (Crouchett, 1982; Santos, 1983).

In North America, Filipino families seem to have more of an extended family system than nuclear system both in structure and function. Filipino households in the United States are generally

larger than United States households and tend to include relatives and acquaintances (Mangiafico, 1988). These relatives and friends may assist with household chores as well as contribute to the financial needs of the family. Although this arrangement is due to economic necessity, it also reflects the traditional Filipino kinship system (Crouchett, 1982; Santos, 1983).

Two studies demonstrated the kinship system among Filipinos in North America. One was conducted in Salinas, California (Almirol, 1982, 1985) and another in Thunder Bay, Ontario (Chen, 1983).

Almirol (1982, 1985) conducted a series of studies of a Filipino community in Salinas, Central California between 1973-1974 and 1979-1980. This community was typical of most Filipino communities in California and the West Coast except for slight differences from those residing in big cities and industrial centers in the United States.

It was suggested in this study that for Filipinos in Salinas, dependence on, and loyalty to, the family and kin group was of paramount importance. Family interests came first and foremost especially in cases where community welfare or the law conflicted with the kin group.

Moreover, although family rights and obligations applied to all kin, these applied more to immediate members of the family rather than to other kin members. There were various forms of assistance to kin members. Examples included the following:

(1) oldtimers (those who came to the United States in 1920s and 1930s) and postwar immigrants sending money, food and clothes to relatives in the Philippines; (2) borrowing money and exchanging food supplies; and, (3) supporting a kin who ran for office in an association.

Chen's (1983) study showed similar results of Filipinos in Thunder Bay, Ontario. There were 50 adult Filipinos aged 20 and over who were interviewed during the summer of 1980 for this study. This constituted 91% of the adult Filipino population in Thunder Bay.

Again, kinship assistance was seen in their immigration patterns. Seventy-nine percent of those who came directly to Thunder Bay are preceded by their family and kinfolk. A similar percentage was seen in those who came from the United States before coming directly to Thunder Bay. The presence of family and kin might have been a major influence in their decision to settle in Thunder Bay.

Furthermore, the support provided by one's kin in the migration process was not only a direct and immediate one but also indirect and cumulative. This support was demonstrated by the finding that among those who had relatives present in other Canadian cities before settling in Thunder Bay, 82% eventually came to Thunder Bay even if other family members and kin were absent from Thunder Bay. This migration pattern indicated how the relatives in other cities served as a support system strong enough to make them venture in a new place by themselves.

In addition, other kin joined the respondents in this study at a latter time. The relatives were either "sponsored" dependents or "nominated" relatives, i.e., family and kinfolk sponsored the official entry of relatives to Canada. Upon coming to Thunder Bay, assistance was continued. Practically all of the respondents expressed having been met and accommodated by their relatives on their arrival to Thunder Bay. The amount of time in which they lived with family and kin varied from a year to two years. While they were provided assistance, these immigrants also reported extending similar assistance to those that followed them.

3.2.2. Authoritarianism

Traditional Filipino families are concerned with receiving the approval of authority figures and avoiding their displeasure (Buduhan & Oandason, 1981; Bulatao, 1973; Carroll et al.,1970; Hollnsteiner, 1979b; Magsino, 1982; Yu & Liu, 1980). Children are socialized to respect authority early in their lives. They are considered good if they obey their parents and do not talk back to them (Buduhan & Oandason, 1981). An ideal child is described primarily as someone considerate of his/her parents, that is, for the most part being deferential to them (Hollnsteiner, 1979b). Beyond this, the child should be diligent in studies and work. Respect for elders is a virtue that Filipino parents strongly teach their children (Carroll et al., 1970; Magsino, 1982). Elders, however, include not just parents

but older siblings, relatives and even neighbors as well. In most Asian families, gender is the determiner of privilege, status, work and socialization, but Filipinos differentiate family roles according to birth order or age (Buduhan & Oandason, 1981).

Older siblings expect respect, deference and obedience from younger ones. Terms of respect are used to address older siblings such as "ate" for an older sister and "kuya" for an older brother. The family roles extend to other relatives and friends within the larger community. Thus, the child calls his/her father's brothers, male cousins and male friends "father". Similarly, one uses the term "mother" for the biological mother's sisters, female cousins and female friends. The child uses "grandfather" to address the grandparent's brothers, male cousins and male friends. The child also uses the appropriate age-sibling terms to all age-group cousins and friends of his/her biological sibling.

A comparison of Filipino youth with American and German youth done by Stoodley (1957) demonstrated the Authoritarian family system of Filipinos. It revealed that Filipino youths placed a higher emphasis on authority and obedience than American youths.

Furthermore, the Filipino youth thought that a boy should not run away from home, because of the father's authority over him. This was in contrast to the German youth who considered running away from home an option when something went wrong. In

addition, the Filipino youth allocated authority to senior siblings as well.

A study of Filipino values done by Bulatao (1973) showed the authoritarian families of Filipinos. Value was defined as the object of a positive attitude, the goal or vision that motivates one to action. The subjects consisted of 50 men and 40 women aged 18-35 working or applying for a job in 4 Manila factories. A set of 62 pictures were taken from local fiction magazines and each subject was asked to tell at least 11 stories. Bulatao's findings were based on 900 such stories.

Four values were identified: family, authority, economic sufficiency and patience. The authority value refers to the approval by the authority figure and by society which is supposed to represent authority in general. According to the respondents, authority is perceived as important in maintaining emotional security and closeness in the family. They believe that authority figures must be respected and obeyed, although this should be within limits. Thus, a person must follow parental advice. One must also keep quiet when scolded and reflect on things being told him/her.

This authoritarian characteristic of traditional Filipino families affects ways of disciplining children. Children are commonly disciplined through physical means such as spanking and hitting (Buduhan & Oandason, 1981; Jocano, 1979). Scolding, name-calling and threats are other forms of discipline. Children are also given more prohibitions instead of demands for

independence or achievement (Yu & Liu, 1980).

3.2.3. Emphasis on Education

Education is more of a family, not just individual, concern in Filipino families. Parents see education as a means to upward mobility, both economically and socially. Thus, it is not uncommon to see parents working hard or going into heavy debt so as to be able to send their children to school, particularly postsecondary training (Buduhan & Oandason, 1981; Jocano, 1979). The oldest child is sent by the parents to school and is expected to send the next older sibling to school when he/she starts working. The pattern goes on for the older children in the family until the youngest child has gone to school.

A Filipino value that is related to the emphasis on education is reciprocity. Reciprocity refers to that principle of behavior in which every service received, whether solicited or not, demands a return (Bulatao, 1973; Hollnsteiner, 1979a; Manlove, 1990). The nature and proportion of this return is determined by the relative status of the parties involved as well as the kind of exchange at issue.

The kind of reciprocity taught by parents to their children is "utang na loob" (debt of gratitude) reciprocity. This is characterized by unequal repayment with no prior agreement, explicit or implicit, on the form or quantity of the return (Hollnsteiner, 1979a). It is required that one recognizes and admits the debt. "Utang na loob" reciprocity is rarely

terminated. In the case of parent-child relationship, children owe their lives to their parents. Thus, children are obliged to support them when they are able to do so. This reciprocity also gives the parents the right to intrude into their children's lives regardless of the children's marital and economic status.

Moreover, reciprocity to parents may be shown through an older sibling's assistance to the education of younger siblings in the family. In Yu and Liu's (1980) study, for instance, children as young as sixteen contribute to their siblings' education or family needs by handing in a portion of their earnings. Also, children working as housemaids in Manila send money back to their parents in the province. This practice is also observed among middle-class families although children usually finish their education first before they are expected to help their siblings or parents.

A recent study that lends support to these two interrelated Filipino values on education and reciprocity was conducted by Manlove (1990). In this unpublished dissertation in anthropology, the researcher analyzed 7400 Thematic Apperception Test (TAT) and Sentence Completion Test (SCT) responses of Filipinos in Ozamis City, a city in southern Philippines. These two instruments were pretested and adapted to the Philippine cultural setting.

The respondents consisted of 4,942 households or 10% of the city's households which included 35,800 persons. Six social classes were represented by this sample.

Four values were identified in the results of this research. These values are achievement, responsibility, appreciation, and nurturance. Concerning debt of gratitude or "utang na loob" reciprocity, Manlove explained how "utang na loob" operates differently with the sample in his research. That is, "utang na loob" appears to be existing mainly in the mind of the giver or benefactor rather than of the recipient. This may be a result of the benefactor's desire for recognition, respect or honor (i.e., appreciation). In a parent-child relationship, therefore, the idea of a child being indebted to one's parents comes more from the parent rather than from the child, using Manlove's analysis. Within this framework, one may understand how parents "oblige" their older children to send their younger siblings to school for the sake of the family.

3.3. Empirical Studies on Filipino Adolescent Achievement

In order to understand the achievement behavior of Filipino adolescents, it is important to examine studies in this area. This section will present the empirical studies on Filipino adolescent achievement. One should note, however, that in Chapter 2 where empirical studies on variables of achievement were discussed, two sections presented relevant studies on Filipino adolescent achievement. These were the sections on Attribution and Achievement (Section 2.1.) and Academic Socialization and Achievement (Section 2.3.). Thus, this current section is now just dealing with other empirical studies on

Filipino adolescent achievement that were not covered in Chapter 2.

Most of these studies, however, focus on Filipinos in the Philippines because of the scarcity of research on Filipino adolescents in North America, in general, and achievement behavior, in particular. School or academic achievement of Filipino adolescents was investigated in several studies in terms of achievement-related variables such as self-esteem (Watkins, 1982a; Watkins & Astilla, 1980a; Youngblood, 1976), socioeconomic status or social class (Youngblood, 1976) and locus of control (Watkins, 1982a).

Youngblood (1976) examined the academic achievement of Filipino high-school students according to three factors: self-esteem, family authority structure and socio-economic status. The students' achievement in reading English, Pilipino (the national language), social studies, mathematics and science were correlated with these three said variables.

A sample of 907 students from 3 high schools in Manila participated in this study. Although all three schools are public schools, one of them had competitive admission standards and thus had limited enrollment. Manila schools were assumed to be represented in this study because of the kinds of high schools that participated. The students were selected by a multistage-cluster-model sampling design. They consisted of males (48%) and females (52%) aged 13-21 years old.

Three questionnaires were used to assess the three

variables: Rosenberg's (1965) scale of self-esteem for self-esteem, a modified version of Langton's (1969) student perceptions of parental strictness for family authoritarianism, and a combination of student reports of parental education and occupation for social status. All three questionnaires were administered in English.

The data revealed that perceptions of family authority and social class correlate with achievement. The basic pattern between gender, self-esteem and achievement are maintained except in two cases: family authority, social class, and social studies; and, social class and Filipino.

Moreover, the correlations of family authority and social class with mathematics and science achievement is higher for boys than girls. More specifically, adolescents from families whose parents were strict on some things but not others did better academically than those whose parents were either very strict or very permissive. Social class also influenced achievement, i.e., students from middle- and upper-class backgrounds got higher grades.

Furthermore, the main effects of self-esteem, family-authority patterns and social class were analyzed using multiple regression. It was found that the rank order of variables predicting achievement and self-esteem were similar. That is, self-esteem was shown to be the highest predictor of achievement with family structure and social class following next.

A moderate relationship between self-esteem and school

achievement is the major finding of Watkins and Astilla (1980a). They studied self-esteem and school achievement of Filipino girls. The subjects consisted of 173 students between ages 11-13 years old in a major private girls' high school in the central Philippines. These subjects actually constituted all first year students whose complete scores in IQ, self-esteem and school achievement were available.

There were two questionnaires used in this study. These were: Coopersmith (1967) Self-Esteem Inventory for self-esteem and Otis Lennon Mental Abilities Test for IQ. In addition, the overall percentage scores in their first semester examinations for school achievement and both self-esteem and IQ were obtained and employed for analysis.

There were two steps done. The first step calculated the correlation between IQ and achievement, whereas in the second step IQ and self-esteem were combined to predict achievement.

The relationship between educational aspirations and several variables such as SES, school environment, influence of assimilation, and occupational aspirations was studied by Azores (1987). This survey was conducted in the spring of 1981 among 90 Filipino twelfth graders in five senior high schools and one alternative high school in the L.A. Unified School District. This sample represented 55% of the total number of Filipino high-school students in the district.

The hypotheses of this study were formulated by the researcher as follows (Azores, 1987, p.45):

" (1) The socioeconomic origins of the students (parents' education, occupation, and income) have a positive influence on the educational aspirations of their offsprings.

(2) School environment (in this case, participating in extra-curricular activities) has a favorable effect on students' educational aspirations.

(3) A student's educational aspirations will be influenced by significant others (parents and peers), by the level of attainment expected of him or her, or presented to him or her as a model.

(4) Assimilation (indicated in this study by length of residence) leads to better educational performance and higher educational aspirations.

(5) Occupational aspirations determine the level of educational aspirations."

The findings of the study indicate that occupational aspiration was the strongest determinant of educational aspiration. Students who wanted to become professionals aspired for a college degree. Self-image was found to be the next-important factor of educational aspiration, that is, those who gave themselves high ratings of academic performance aspired to go to college.

Further, there was a positive correlation between the students' self-rating and GPA. Those with high GPAs rated themselves higher than those with low GPAs. However, those with low GPAs also rated themselves well although not as high as those

with high GPAs.

According to the researcher, the students who have low GPAs and think they are prepared for college may have any of the following: (1) unrealistic expectations of themselves and of the real world; (2) lack of personal commitment in their high aspirations; and, (3) the thought that there is more than GPA that makes a "good" student.

Also, concerning language use, it was found in this study that bilingual students had higher occupational aspirations than monolingual students. Azores (1985) offered possible explanations for this finding, such as the high value placed on college education by these bilingual students as inculcated by their parents to them. Also, there was the belief by the bilingual students that difficulties in the workforce due to their accent in speaking English may be lessened by higher education. Thus, their educational aspirations were higher than monolingual students.

A study of Filipino academic achievement according to background variables (e.g., IQ, sex, socioeconomic status, family relationships) and personality variables (self-esteem and locus of control) was conducted by Watkins (1982a). He employed path analysis to determine the following: causal antecedents of self-esteem, causal antecedents of locus of control, and causal antecedents of academic achievement.

In this structural model, IQ, gender, socio-economic status and quality of family relationships are postulated as causal

antecedents of both self-esteem and locus of control. There is no causal link assumed between self-esteem and locus of control. The model allowed for an examination of the extent to which personality variables account for the relationship between the background variables and achievement and the extent to which relationships between the personality variables and achievement are accounted for by the background variables.

The data on antecedents of self-esteem confirmed earlier predictions. That is, higher levels of self-esteem were associated with those who perceived satisfactory family relationships, had higher IQs, and were males. These three antecedents, however, could only account for 13.7% of the variance of self-esteem scores.

Regarding antecedents of locus of control, it was found that females were more internal than males. Although this finding contradicts Western research, it is consistent with previous studies on Filipinos (e.g., Watkins, 1982b; Watkins & Astilla, 1980b). Furthermore, the hypothesis that IQ is positively related to internal locus of control was confirmed. However, the relationship between locus of control and family relationships accounted for 16 percent of the variance of locus of control scores.

Concerning antecedents of academic achievement, it was found that IQ was the major determinant of academic achievement. Gender and quality of family relationships did not affect academic achievement significantly. Self-esteem correlated .23

with grades, but other antecedents, particularly IQ, accounted for two-thirds of this association. Thus, self-esteem did not affect achievement to a large extent.

Internal locus of control correlated .32 with grades. Sixty percent of this relationship could not be accounted for by other variables in the model. Locus of control, then, had a small, although not insignificant, association with achievement independent of the other antecedents. This study showed that self-esteem and locus of control are independently related to achievement. Forty-one percent of the variance of achievement scores was accounted for by five antecedents of academic achievement.

This study by Watkins (1982a) is similar to the present research in three ways: the use of a Filipino sample, measuring academic achievement through grades, and employing path analysis as the main method of analysis. Thus, a comparison between Watkins' findings and the results of the present study will later be made in Chapter 7, i.e., Discussion section.

3.4. A Summary on the Filipino Community

Filipinos are one of the largest Asian immigrant groups in the United States and Canada (United States Bureau of the Census, 1992; 1991 Census of Canada, 1992). Filipino immigration patterns in these two countries differ (Brett, 1977; Buduhan, 1986; Crouchett, 1982; Hawkins, 1974; Mangiafico, 1988; Stern, 1989).

Nevertheless, Filipino/Canadians and Filipino/Americans share similar cultural characteristics and family values such asFamily Cohesiveness (Almirol, 1982; 1985; Carroll, Araneta, Arnaldo & Keane, 1970; Castillo, Weisblat & Villareal, 1968; Chen, 1983; Crouchett, 1982; Mangiafico, 1988; Santos, 1983; Yu & Liu, 1980), Authoritarianism, (Buduhan & Oandason, 1981; Bulatao, 1973; Carroll, Araneta, Aranldo & Keaner, 1970; Hollnsteiner, 1979b; Stoodley, 1957; Yu & Liu, 1980), and, Emphasis on Education (Buduhan & Oandason, 1981; Hollnsteiner, 1979a; Jocano, 1979; Manlove, 1990; Yu & Liu, 1980).

Filipino adolescent achievement is affected by several variables. Among those discussed in this section were: self-esteem (Watkins, 1982a; Watkins & Astilla, 1980a; Youngblood, 1976), socioeconomic status or social class (Youngblood, 1976), and locus of control (Watkins, 1982a).

CHAPTER 4: THE PRESENT STUDY

Chapter 1 discussed the choice for Weiner's model of achievement as the theoretical framework for the present study. This study will try to improve on this theoretical model by addressing two methodological issues on Weiner's model and including other variables of achievement, aside from causal attribution. The empirical studies of five such variables of achievement were presented in Chapter 2. In order to provide the cultural context of the present study, background information on Filipino adolescents in Canada and the United States was provided in Chapter 3. The present study will now be discussed in terms of its specific objectives, the conceptual model of achievement among Asian adolescents in North America formulated by Schludermann & Schludermann (1980), the definition of the variables used in the study, the hypotheses to be tested and the proposed path-analytic model of achievement in Filipino adolescents.

4.1. Objectives of the Present Study

As previously mentioned in Chapter 1, Section 1.4., the goals of the present study are twofold: to examine the variables of academic achievement and to develop a path analytic model of achievement in Filipino adolescents. These two goals are made more specific and formulated into the objectives of the present study as follows:

(1) to examine whether the three dimensions of attribution proposed by Weiner (1986) exist in the ten sources of Attribution developed by Watkins & Astilla (1984) and, furthermore, based on these dimensions of attribution, examine the relationship between Attribution and Academic Achievement, operationalized as the students' Grade Point Average (GPA).

(2) to consider the effects of the three general parenting dimensions based on CRPBI-30 (Schludermann & Schludermann, 1988) on Academic Achievement, operationalized as the students' GPA. These parental dimensions are Acceptance, Psychological Control and Firm Control.

(3) to look at the relationship between Academic-Socialization styles formulated by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987) and Academic Achievement, operationalized as the students' GPA. These Academic-Socialization styles are Authoritarian, Authoritative and Permissive styles.

(4) to study the impact of the demographic characteristics of the students on their Academic Achievement. These demographic characteristics may be categorized into two: Individual-related and Parent-related. The individual-related variables include the students' Age, Gender, Involvement with school work and Importance of Family Reputation. The Parent-related variables consist of Parental Education and Parents' Involvement with the student's school work.

(5) to develop a path-analytic model that links the

relationships between these achievement variables and GPA as the dependent variable (in the San Francisco sample) and Student Involvement as the dependent variable (in the Winnipeg sample). This path-analytic model is an attempt to integrate the intermediate and direct linkage among these variables and GPA (in the San Francisco sample) or Student Involvement (in the Winnipeg sample).

4.2. A Conceptual Model of Achievement among Asian Adolescents in North America (Schludermann & Schludermann, 1980)

The objectives of the present study are developed from a conceptual model of achievement among Asian adolescents in North America formulated by Schludermann & Schludermann (1980). Figure 1 on page 138 illustrates this model.

This conceptual model is specifically designed to examine the culture-related variables among Asian ethnic groups. These cultural variables include ideology, values, customs, language and other characteristics of the ethnic group.

According to this conceptual model there are several variables impacting Achievement behavior. These variables can be classified into three categories: (1) Demographic and Family variables; (2) Parental Socialization, and, (3) Students' Responses. The demographic and family characteristics of the parents, such as their socio-economic status, education, age and gender, influence the way they socialize their children. This socialization, in turn, affects the adolescents' behaviors and

attitudes which consequently determine the students' achievement.

This conceptual model can be adapted to study the culture-related specific predictor variables of the identified dependent variables. The dependent or outcome variables may vary depending on the goal of the research. The relevant culturally-salient predictor variables can be a few or many variables which can be the basis for path analysis or other causal models, or multivariate analysis.

This model was tested in a study by Mak (1988) with three comparative groups of adolescents: Hongkong-Chinese, Chinese-Canadians, and Euro-Canadians. The model was substantiated in terms of its usefulness in ethnic studies.

Schludermann & Schludermann's proposed model is therefore being applied for research in the present study. This model applies to achievement behavior in general, of which academic achievement is a specific type. In the case of the present study, the dependent variable is academic achievement, measured through the students' grades.

According to the premises of this conceptual model, pertinent variables are identified that are specific to the Filipino-American/Canadian sample. For instance, under family variables, nonintact families do not necessarily imply that the parents are divorced; it may also mean that the parents are legally married, but one parent is in the Philippines taking care of the other children there due to economic reasons.

Similarly, the parents' education is considered because one

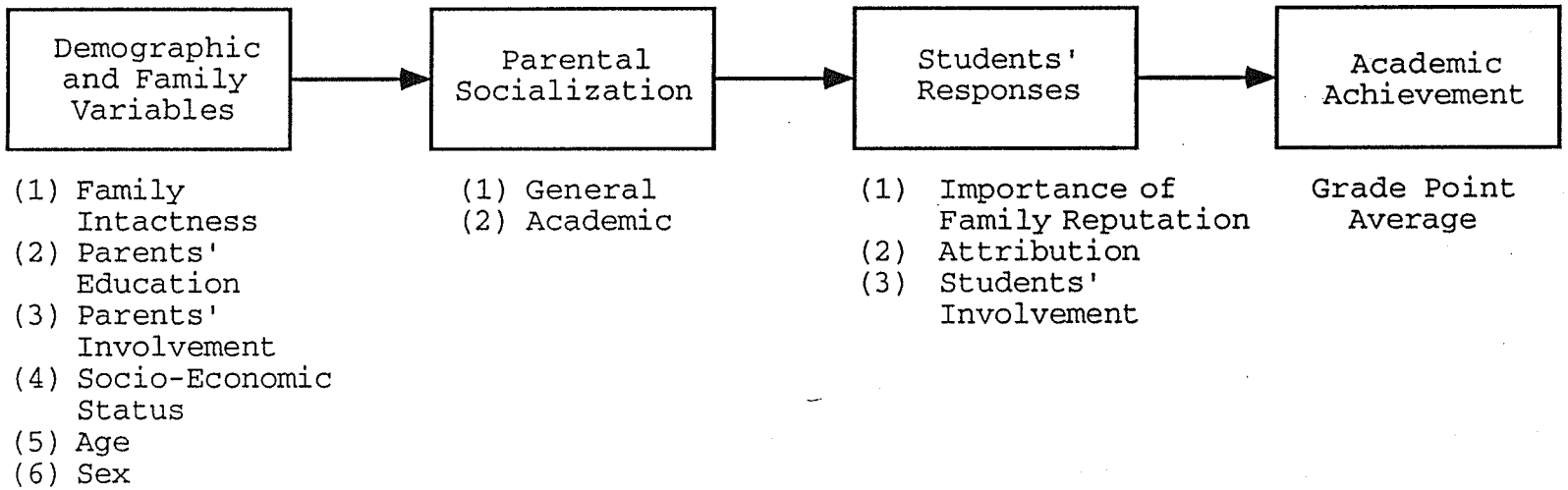
parent may have obtained a college education in the Philippines, but does not have a job commensurate to this training. Also, the parents' place of birth and length of stay in the U.S. or Canada are information deemed important in understanding their parenting practices. Other demographic and family variables are the parents' age, gender, and job. Another important family variable is the Parents' Involvement in their children's studies. Although greater Parental Involvement may be typical of immigrant families in general, this variable is worth studying in the context of Filipino families. These informations about the adolescents' parents and family are postulated to have influenced the way the parents raise their chidren.

Thus, Socialization is examined in two areas: General and Academic. Schludermann & Schludermann's (1988) CRPBI-30 addresses the general parenting dimensions whereas the School and Family Questionnaire by Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh (1987) deals with Academic-Socialization styles.

Consequently, the students are expected to respond in ways that reflect their parents' demographic characteristics and socialization practices. The students' responses may include their Involvement with school work, their causal Attribution for success or failure in school, and the value or Importance they give to Family Reputation. These behaviors and attitudes finally may determine their achievement behavior; in the case of the present study, that of Academic Achievement operationalized as the students' Grade Point Average.

FIGURE 1

A Conceptual Model of Academic Achievement
Among Asian Adolescents in North America
Schludermann & Schludermann (1980)



4.3. Definition of Variables

In order to clearly understand the variables to be examined in the present study, the operational definitions of these variables are provided below:

(1) Academic Achievement - The student's Grade Point Average (GPA) from academic records is the measure of academic achievement as obtained from their school records. GPA ranges from 0 to 4.0, with the following meanings: 0 to .99= Failing, 1.00 to 1.99= Poor, 2.00 to 2.99= Average, and 3.00 to 4.00= Good.

GPA's are available only in the San Francisco sample due to difficulties in obtaining school records in the Winnipeg sample. It was originally proposed in the Winnipeg sample that self-reported grades serve as the measure of academic achievement. However, most Winnipeg students reported either A's or B's, thus, making the grades unfairly distributed. These issues will be further discussed in the Method section (see Chapter 5).

(2) Attribution - There are ten sources of causal attribution from Watkins & Astilla's (1984) study (see Sections 2.1 and 5.2.3. for a list of these ten sources of attribution). The students were asked to state their perceived feelings about their grades, (i.e., failure or success) and then to rate the importance of each of the ten causal attributions for their success or failure provided by Watkins & Astilla (1984). These ten sources of attribution were factor analyzed to examine the three dimensions of attribution formulated by Weiner (1986).

Three factors of attribution were identified as follows: Internal Attribution, Task Difficulty, and Chance.

(3) General Parenting Practices - These refer to the three CRPBI-30 dimensions of Acceptance, Psychological Control and Firm Control. The definitions of these dimensions were adopted from studies by Becker (1964), Schaefer (1959) and Schludermann & Schludermann (1988). Acceptance includes the following characteristics: accepting, affectionate, approving, understanding and child-centered. Firm Control is comprised of the variables of many rules and restrictions, strict enforcement of demands, punitiveness, ignoring, irritability, and use of fear to control. Psychological Control has the following variables: the use of psychological means of control, low punitiveness, not using physical punishment, and referring to parent's emotional reactions to child's misbehavior. The students' scores on each dimension will be obtained from the items in the CRPBI-30 corresponding to these dimensions.

(4) Three Academic Socialization styles - The three academic socialization styles to be used in the present study were developed by Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh (1987) after Baumrind's (1971) classification of parenting styles. These academic socialization styles are Authoritarian, Authoritative and Permissive. Questions on academic socialization styles deal with family communication, parents' responses to the students' grades, and the parents' degree of involvement with their children's school work.

(4.1) In the Authoritarian style, parents are characterized as follows: (4.1.1) In family communication, parents tell their sons and daughters not to argue with them, that their children will know better when they grow up, and that the parents are always right and should not be questioned. (4.1.2) When the adolescents get poor grades, parents get upset, reduce the children's allowance, or "ground" them. (4.1.3) When the adolescents get good grades, the parents tell their sons and daughters to perform even better or comment that their other grades should be as good.

(4.2) Authoritative socialization is shown in the following ways: (4.2.1) In family communication, parents tell their sons and daughters to consider both sides of the issues and admit that there are times when the adolescents know more; furthermore, parents discuss politics with their sons and daughters and give emphasis on everybody's role in family decision-making. (4.2.2) When the adolescents get poor grades, parents take away their freedom, offer to help them, and encourage them to try harder. (4.3.3) When the adolescents get good grades, parents praise them and give them more freedom to make decisions.

(4.3) In Permissive parenting, (4.3.1) Parents lack concern and involvement in their children's school work and activities. (4.3.2) Parents do not care about their children's grades in school, whether good or bad. (4.3.3) For these parents, their children's hard work in school work is not

important to them. (4.3.4) Parents do not attend school programs for parents, do not check their sons' and daughters' homework, nor help them with it.

(5) Demographic variables related to both the students and their parents: These are:

(5.1) Age - Younger adolescents are aged 11-15 while older adolescent are aged 16-19.

(5.2) Gender - The subjects stated their gender as either Male or Female.

(5.3) Student Involvement - This is the overall Involvement score obtained by the student from the average scores of questions on three questions: (5.3.1) one's interest in five specific courses (Mathematics, English, Social Studies, Science, and Vocational Course), (5.3.2) the time and efforts he/she puts into studying each of the five courses specified above, and (5.3.3) the number of excused and unexcused absences in each of the five courses specified above.

(5.4) Importance of Family Reputation - In the San Francisco sample, this variable refers to the student's average rating of three questions related to keeping a good family reputation. These questions are: "How important is school performance to your family ?", "To what extent may your family name be ruined by a student being suspended or dropped out of school?", and "How important is it for you to have/keep a good family name and reputation?". In the Winnipeg sample, the students were asked only the question of " How important is it

for you to have/keep a good family name and reputation?". The Winnipeg study was done earlier than the San Francisco study. It was found by the researcher that it would be clearer if there are separate questions on family-related and school-related reputation. Thus, two questions on school-related family reputation were added to the San Francisco questionnaire to reflect this difference.

(5.5) Parental Education - This refers to either low or high education of the student's father and mother rated separately by the students. "Low Education Level" means that both mother and father have not finished a four-year Bachelor's degree while "High Education Level" means that both parents have finished at least a four-year Bachelor's degree.

(5.6) Parental Involvement - This is defined as the time and efforts spent by parents in helping their children do their homework, attending school meetings or being part of the students' school activities and work, supporting students when they get poor grades and reinforcing them when they get good grades. This is obtained by an overall score of the student's responses to the questions dealing with the above specific questions.

4.4. Hypotheses in the Present Study

The following hypotheses are formulated based on the objectives of the present study cited above as well as the conceptual model formulated by Schludermann & Schludermann (1980). There are nine sets of hypotheses totalling 16 individual hypotheses. The hypotheses are categorized under the following topics:

(1) adolescents' perceived parenting practices as influenced by their age and gender,

(2) general parenting practices and academic achievement,

(3) academic achievement-related parenting practices and academic achievement,

(4) attributions and academic achievement,

(5) student involvement and academic achievement,

(6) adolescents' gender and academic achievement.

4.4.1. Hypotheses 1a, 1b, 2a & 2b: The Adolescents' Gender and Age and their Perceived Parenting Practices

Three parenting dimensions were studied: Acceptance, Psychological Control and Firm Control. The Children's Report of Parent Behavior Inventory-30 (CRPBI-30) was used to measure these dimensions. Maternal and paternal socialization practices were measured separately with Form for Mother and Form for Father, respectively. These three parenting dimensions were examined in relation to the subjects' gender and age.

4.4.1.1. Hypothesis 1a & 1b: The Gender of the Adolescents and their Perceived Parenting

Parental Acceptance, Psychological Control and Firm Control may be perceived differently by adolsecent sons and daughters. In general, girls are closer to their mothers than boys and boys are closer to their father than girls. Parents are also perceived by the children to apply appropriate control on them, using both psychological and physical methods. More specifically, mothers exert more psychological and Firm Control on their teenaged daughters than the fathers while fathers will exert more psychological and Firm Control on their teenaged sons than mothers do on their sons. Therefore, the following were hypothesized:

(1a) On Maternal Parenting Practices- Females are predicted to have higher scores on perceived maternal Acceptance, Psychological Control, and Firm Control than males.

(1b) On Paternal Parenting Practices- Males are expected to have higher scores on perceived paternal Acceptance, Psychological Control and Firm Control than females.

4.4.1.2. Hypothesis 2a & 2b: The Age of the Adolescents and their Perceived Parenting

In considering the age of adolescents and how this influences their perception of paternal and maternal socialization practices, older adolescents, on the whole, seem to feel more accepted by their parents than the younger adolescents.

In addition, parents tend to apply more Psychological Control and less Firm Control on older adolescents than on younger adolescents. Adolescents are likely to perceive these parental behaviors. In view of these, the following hypotheses were offered:

(2a) Older adolescents are more likely to have higher scores on perceived parental Acceptance and Psychological Control than younger adolescents.

(2b) Younger adolescents would tend to have a higher score on perceived Firm Control than older adolescents.

4.4.2. Hypotheses 3a, 3b, & 4: Parenting and Academic Achievement

The three parenting dimensions of Acceptance, Psychological Control, and Firm Control were examined in relation to academic achievement. That is, the scores on CRPBI were associated with the grades of the students. Furthermore, maternal and paternal socialization practices were separately assessed in adolescent boys and girls.

4.4.2.1. Hypothesis 3a & 3b: Parental Acceptance and Academic Achievement

Most adolescents consider themselves to be loved or accepted by their parents in spite of the control exerted by the parents either psychologically or physically. Moderate to high perceived parental Acceptance was expected of the subjects in the

present study. Parental Acceptance per se, however, does not greatly affect school achievement. However, high parental Psychological Control is necessary. In combining moderate to high Acceptance and high Psychological Control, a positive relationship with academic achievement was predicted. The hypotheses offered in relation to parental Acceptance and achievement were:

(3a) In general, the adolescents with good grades are expected to have a moderate-to-high score on perceived parental Acceptance.

Assuming this condition is met,

(3b) Adolescents who score high on perceived parental Psychological Control will tend to have higher grades than those who score low on perceived parental Psychological Control.

4.4.2.2. Hypothesis 4: Parental Firm Control and Academic Achievement

Parental Firm Control, on the other hand, has been shown to be negatively associated to academic achievement. High Firm Control is not conducive to good academic achievement of the adolescents. Many rules and severe restrictions limit a child's opportunities and motivation to explore, discover and learn. Thus, it was predicted that:

(4) Adolescents who have a high score on perceived parental Firm Control are more likely to have lower grades than those who have a low score on perceived parental Firm Control.

4.4.3. Hypothesis 5a & 5b: Academic Socialization and Academic Achievement

Socialization practices as perceived by the adolescents that relate directly with their school competence were examined in this study. Three academic socialization styles were assessed: Authoritarian, Authoritative, and Permissive. Several questions in the "School and Family Questionnaire" were used to obtain scores indicative of the perceived socialization style. Most studies utilizing North American samples show that the Authoritative Style is most appropriate in producing high academic achievement among adolescents.

However, studies in nonWhite populations such as Blacks and Asians indicate otherwise. On the contrary, high achievement is seen among Asian adolescents whose parents are Authoritarian. Permissive Style, nevertheless, has been found to result in low academic achievement in any population. In view of this, the predictions below were offered:

(5a) Adolescents who score high on Authoritarian Socialization Style will tend to have higher grades than those who have a low score on Authoritarian Style.

(5b) Adolescents who score high on Permissive Style are more likely to have lower grades than those who have a low score on Permissive Style.

4.4.4. Hypotheses 6a, 6b, 6c, 6c & 7: Attributions and Academic Achievement

The major assumption in the theoretical framework of the present study is that the stability dimension of attribution is the main determinant of success or failure in achievement. That is, attributing success to stable causes and failure to unstable causes leads to higher achievement behavior.

In this research, the stable causal attributions are as follows: (1) Ability; (2) Difficulty of the assignments and examinations; (3) Difficulty of the subjects as a whole; (4) Interest in the courses being tested; and (5) Teachers' explanation of the material. The unstable causal attributions, on the other hand, are the following: (1) How much one tried in studying; (2) How much one prepared for the assignments and examinations; (3) Conditions at home being suitable for study; (4) Luck; and, (5) Fate or destiny.

In order to assess the success and failure conditions, subjects were asked what feeling they have about their grades, either a feeling of success or a feeling of failure, after they have been asked their grade point average. Moreover, the subjects were asked to rate their attributions from least to most important (1 = not at all important, 2 = somewhat important, 3 = important, 4 = very important, 5 = extremely important).

4.4.4.1. Hypothesis 6a, 6b, 6c, & 6d : The Locus, Stability, and Controllability of Attributions and Academic Achievement

Attributions have three dimensions: locus, stability, and control. When considering all three dimensions, high achievement is produced by attribution of success to causes that are internal, stable and controllable, and attribution of failure to causes that are external, unstable and uncontrollable. In view of this, the hypotheses below were formulated:

(6a) Adolescents who attribute success in school achievement to Internal, Stable, and Controllable causes (i.e., those who give higher ratings to interest in the courses being tested than other causes) are predicted to have higher grades than those who attribute success in academic achievement to external, unstable and uncontrollable causes.

(6b) Adolescents who attribute failure in school achievement to External, Unstable, and Uncontrollable causes (i.e., those who give higher ratings to luck and fate or destiny than other causes) are expected to have higher ratings than those who attribute failure in school achievement to internal, stable and controllable causes.

Furthermore, in examining the stability dimension alone, success in school achievement is due to stable attributions while failure is due to unstable attributions. Therefore, the following were hypothesized:

(6c) Adolescents who attribute success in school achievement to Stable causes (i.e., those who give higher ratings

to ability, difficulty of assignments and examinations, difficulty of subjects as a whole, interest in the areas being tested, teachers' explanation of the material than unstable causes) will tend to have higher grades than those who attribute success to unstable causes.

(6d) Adolescents who attribute failure in school achievement to Unstable causes (i.e., those who give higher ratings of how hard one tried in studying, how much one prepared for assignments and examinations, conditions at home being suitable for study, luck, fate or destiny, than stable causes) are more likely to have higher grades than those who attribute failure to stable causes.

4.4.4.2. Hypothesis 7: Attributions and Expectancy of Success

Another variable that is related to attributions is expectancy of success. To find out the subjects' expectancy of success, they were asked the question: "What grades do you expect to get in the next term?". Attribution to stable causes is expected to yield high expectancy of success which in turn results in high achievement behavior. It was, thus, hypothesized that:

(7) Adolescents who attribute success in school achievement to stable causes tend to expect higher grades in the next term compared to currently obtained grades than those who attribute success in school achievement to unstable causes.

4.4.5. Hypothesis 8: The Students' Involvement in School Work and Academic Achievement

The students' involvement in school work is positively associated with their school performance. Their involvement includes putting more effort and spending more time in their studies, trying harder to learn the subjects and to improve when they get poor grades, and avoiding absences in classes. In view of this, it was predicted that:

(8) Adolescents who score high on the Student Involvement items in the "School and Family Questionnaire" are more likely to have higher grades than those who score low on the Student Involvement items in the "School and Family Questionnaire."

4.4.6. Hypothesis 9: The Adolescents' Gender and Academic Achievement

The existing gender differences reported in the literature employing White samples show that males achieve better than females because of socialization. Similarly, Filipino parents in the Philippines do not appear to differ much from the same goals and values in bringing up their children.

However, this may apply only to achievement behavior in the future in terms of a good postsecondary education and an established job later on. In secondary school, both boys and girls are taught to achieve highly. Furthermore, Filipino immigrants in North America, just like other immigrant groups, consider education as a means of upward social and economic

mobility. It is not surprising then to have Filipino parents encouraging and expecting both sons and daughters to finish high school at least. High school girls, however, are more obedient to their parents and more disciplined in their studying than boys. Therefore, they achieve better than boys. It was hypothesized that:

(9) Females are predicted to have higher grades than males.

4.5. The Proposed Path-Analytic Model of Academic Achievement in Filipino Adolescents

In addition to the hypotheses offered above, the present study also aims to formulate a path-analytic model of academic achievement in Filipino adolescents. It will try to develop a model with GPA as the dependent variable in the San Francisco sample and Student Involvement as the dependent variable in the Winnipeg sample. More specifically, it is expected that this path-analytic model will provide a more comprehensive explanation of how these achievement variables are related to each other and to GPA. The different kinds of effects will also be specified which include total effects, direct effects, indirect effects and spurious effects. This path-analytic model will be examined in view of the conceptual model proposed by Schludermann & Schludermann (1980). Hopefully, it will address the issue of culture-related variables impacting the academic achievement of the Filipino adolescents in Canada and the United States.

CHAPTER 5: METHOD

This chapter will discuss the subjects who participated in the present study, the instruments used and the procedure of data-gathering. These topics will be presented separately for the Winnipeg and San Francisco Bay Area samples.

5.1. Subjects

There were two groups of subjects in this study. Both groups consist of Filipino junior and senior high school students. One group comes from Winnipeg, Manitoba, Canada and the other group comes from the San Francisco Bay Area in California, United States.

5.1.1. Subjects from Winnipeg

The first group of subjects who participated in this study consisted of Filipino adolescents in Winnipeg. Data were collected from 400 junior-high and senior-high school students from April-July, 1989. However, the students' actual grades and GPAs were not available. Instead, the students were asked to report their grades (see p. 139, Chapter 4).

Unfortunately, most students reported either Bs or As, making the data in terms of grades unfairly distributed. That is, the sample consisted largely of good or very good students. Thus, this sample was not used in analyzing the hypotheses related to academic achievement as measured through the students'

Grade Point Average (GPA).

Self-reported grades were found to be an unreliable basis in measuring academic achievement. When correlation was done between the GPAs and self-reported grades of San Francisco subjects, a low correlation coefficient of .38 was found. The major reason for the unavailability of actual grades of the Winnipeg sample was the method used in data-gathering. Most of the schools, except the private schools, were not willing to allow the students in their schools to participate in this research if done through the school system.

Thus, the students were contacted through various sources in the Winnipeg Filipino community such as churches, dance groups, youth clubs, and families. A large proportion of these adolescents came from families whose parents participated in a Filipino parenting study in the summer of 1988. A parents' study was conducted by this researcher in the summer of 1988 to examine parental attitudes, beliefs and behaviors related to adolescent development (Salazar, 1988). The adolescent children of these parents later joined the adolescent study of academic achievement in 1989.

Moreover, the adolescent subjects came from different community resources. Although the sampling procedure was nonrandom, various sectors of the Filipino adolescent population in Winnipeg were well represented. Almost half of them go to the schools in central Winnipeg (49%) and 37% go to the schools in north Winnipeg, where most Filipinos are concentrated. About 14

percent of the students attended schools in south Winnipeg.

In addition, the distribution of boys and girls in the young and old categories was fairly equal. For a summary of the age and gender distribution of the Winnipeg sample, see Table 1 below.

TABLE 1

Gender and Age of Subjects from Winnipeg

	Age of Subjects	
Gender of Subjects	Young (11-15)	Old (16-19)
Female (n=205/51%)	107	98
Male (n=195/49%)	99	96
N = 400	(n = 206/52%)	(n = 194/48%)

The grade-level distribution of the subjects from Winnipeg was as follows: Grade 7= 68(17%), Grade 8= 65(16%), Grade 9= 65(16%), Grade 10= 75(19%), Grade 11= 80(20%), Grade 12= 47(11%). Concerning the parents' background, it was earlier mentioned that all families were intact, i.e., the student lived with both parents in Winnipeg.

Also, most parents, if not all, were assumed to be born in the Philippines, although they really were not asked this question unlike in the San Francisco sample. This assumption was based on the fact that Filipino immigration to Canada started only in the 1960s and thus, most of the parents were first

generation immigrants (Hawkins, 1974).

With respect to the parents' education, most parents had a high school or less than high school education, that is, 45% of mothers and 40% of fathers. However, there was also a substantial portion of those who had some college (20% of mothers and 23% of fathers), finished a four-year Bachelor's degree (10% of mothers and 11% of fathers), and even had a graduate or professional degree (24% for mothers and 24% for fathers).

Concerning the parents' occupation, many of the parents had a job either in the manufacturing or service areas (i.e., 48% of mothers and 45% of fathers). Several of the fathers were also in the technical or professional fields, i.e., 29%, and a few of the mothers, i.e., 18%. However, some mothers had office or clerical jobs, i.e., 12% while only a few fathers had the same jobs, i.e., 9%. Some parents also had their own business (9% of mothers and 7% of fathers). It is also noteworthy that many of the parents were not working, that is, 13% of mothers and 10% of fathers. This may be due to either younger parents who were unemployed or older parents who had already retired from their job.

5.1.2. Subjects from San Francisco

In order to get GPA's as a measure of academic achievement instead of self-reported grades, a second sample was used in the present study. California was chosen in view of the large Filipino population in this area as well as the openness of the school system to accommodate ethnic research. The students'

actual grades were obtained from the school records with the consent of the students' parents and the schools.

A group of 535 Filipino students from the San Francisco Bay Area participated in this research. There were 284 (53%) girls and 251 (47%) boys. Their ages ranged from 11-19. Young adolescents, aged 11-15 comprise 54% or 288 of the sample. Old adolescents, aged 16-19, consist 46% or 247 of the sample. A detailed distribution of the subjects' gender and age is shown in Table 2.

TABLE 2

Gender and Age of Subjects from the San Francisco Bay Area

	Age of Subjects	
Gender of Subjects	Young (11-15)	Old (16-19)
Female (n=284/53%)	128	124
Male (n=251/47%)	160	123
N = 535	(n = 288/54%)	(n = 247/46%)

These adolescents came from three junior high/middle schools and four high schools in the San Francisco Bay Area where there were large Filipino concentrations in the area. The data were collected from these students in the school year 1990-1991.

These schools represented both the inner city and suburban areas. There were two inner-city high schools and one inner-city

junior-high school. There were 2 suburban-junior-high schools (one was south of San Francisco, another was northwest of San Francisco) and two suburban high schools (both were south of San Francisco).

There was a fair representation of students from the various grade levels. The number of students in each grade level were summarized as follows: Grade 6 = 9 (2%), Grade 7 = 45(8%), Grade 8 = 76(14%), Grade 9 = 67(13%), Grade 10 = 121(23%), Grade 11 = 116(22%), Grade 12 = 100(19%).

Three-hundred and twenty six (61%) of the subjects have been staying in the U.S. for six or more years. Only 88 (16%) were new arrivals in the U.S., having stayed there for less than two years. Another 121 (23%) had been there for 3-5 years. Most of them, however, were born in the Philippines (338 or 63%). Some were born in California (171 or 32%). A few were born in another U.S. state (21 or 4%) or in another country (5 or 1%).

When asked about the first language(s) spoken at home, the majority of them indicated Tagalog, the basis of the official language, Pilipino (51% or 271/535), although a large proportion spoke English (37%). The rest spoke Ilokano (4%), Visayan (3%), or another Filipino dialect (6%).

Concerning their parents' background and family structure, these subjects came mainly from intact families, that is, the child lived with both parents in the Bay Area (68% or 390/535). Only 32% (145/535) were from nonintact families which included any of the following: (1) One parent was deceased and the

student lived with the living parent and/or a guardian (14 or 3%). (2) The natural parents were not divorced or separated but both were in the Philippines and the student lived with adult relatives or guardians in the Bay Area (43 or 8%). (3) The natural parents were divorced or separated but both were in the Philippines and the student lives with adult relatives or guardians in the Bay Area (43 or 8%). (4) The natural parents were divorced or separated, both were in the Bay Area and the student lived with one of them (41 or 8%). (5) The natural parents were divorced, one was in the Philippines and the student lived with one of them in the Bay Area (28 or 5%).

Most of the parents of the students in this study were born in the Philippines. Ninety-five percent of both mothers (509/535) and fathers (507/535) were born in the Philippines. The rest were born in California (3% of mothers, 2% of fathers), another U.S. State (1% of mothers and 2% of fathers) or another country (1% of both mothers and fathers).

With regard to the parents' education, 321 (60%) of mothers and 325 (61%) of fathers did not complete college. That is, they finished elementary, some high school, finished high school, or had some college, but did not complete a 4-year degree. Two-hundred and fourteen or 40% of mothers and 210 or 39% of fathers completed college, either finishing a Bachelor's degree or doing a graduate/professional training. Concerning their jobs, most parents were in the skilled or service jobs, i.e., 36% or 192 of mothers and 32% or 167 of fathers.

5.2. Instruments

There were two questionnaires used in the present study: the Children's Report of Parental Behavior Inventory (CRPBI-30, by Schludermann & Schludermann, 1988) and the School and Family Questionnaire (SFQ, by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987). The same CRPBI-30 questionnaire was used for both the Winnipeg and San Francisco samples (see Appendix A for a copy of the CRPBI-30).

In addition, there was a section on the School and Family Questionnaire that deals with the ten sources of attribution of school success or failure taken from Watkins & Astilla's (1984) questionnaire. Except for the different questions on demographic information, the SFQ questionnaire for the San Francisco and Winnipeg samples are almost identical (see Appendix B for a copy of the SFQ used in the Winnipeg sample and Appendix C for a copy of the SFQ used in the San Francisco sample).

5.2.1. The Children's Report of Parental Behavior Inventory-30 (CRPBI-30)

The Children's Report of Parental Behavior Inventory-30 (CRPBI-30) is a questionnaire on parenting behaviors as perceived by adolescents. The CRPBI was originally developed by Schaefer (1965).

Schludermann and Schludermann (1970) shortened Schaefer's version from 26 to 18 scales resulting in 108 items. This questionnaire is called CRPBI-108. CRPBI-108 items were

selected on the bases of high reliability, variability and applicability to parent behavior. Moreover, the items inappropriate to ethnic, social or religious minority groups were eliminated to make the questionnaire suitable for cross-cultural research. It has been used in various cultural groups such as French-speaking Belgians, Hutterites, lower-class rural Manitobans, and English-speaking adolescents in India.

Three factors were identified in factor analyzing Schaefer's original version and CRPBI-108. These were: Acceptance/ Rejection, Psychological Control/ Psychological Autonomy, and Firm Control/ Lax Control. These factors were replicated regardless of the gender of the parent, the gender of the child, the version of the instrument or the cultural group studied.

The CRPBI-108 was later shortened into a questionnaire with just 30 items. This is known as CRPBI-30 (Schludermann & Schludermann, 1988). These items were derived from the three factors or dimensions identified through factor analysis instead of the 18 scale scores. Thus, CRPBI-30 is shorter than CRPBI-108 and therefore faster to administer than CRPBI-108. It is nevertheless equally valid and reliable as the CRPBI-108.

There are three parenting dimensions measured in the CRPBI-30: perceived parental Acceptance versus Rejection, perceived Psychological Autonomy versus Control, and perceived Parental Firm Control versus Lax Control. There are two forms in CRPBI-30: Form for Mother and Form for Father, each form with 30 items. The Form for Mother has questions on adolescents'

perception of their mother's behavior while the Form for Father deals with perception of their father's behavior.

5.2.2. The School and Family Questionnaire

The School and Family Questionnaire (SFQ) is patterned after Dornbusch et al.'s (1987) questionnaire used in studying parenting and school achievement. Some questions, however, were modified and several questions were added to obtain information needed in the present study.

There are 159 questions in the School and Family Questionnaire. The major areas in the questionnaire include the following:

(1) Personal Background Information - Examples are the adolescents' date of birth, age, gender, grade level in school, and name of school; length of stay in the U.S. and California/ Winnipeg; languages spoken at home; place of birth; parents' place of birth, educational background and occupation; family structure; educational goals and expectations, and conditions at home related to studying.

(2) Socialization practices related to children's academic achievement - Items are on family communication, parents' concern and involvement with children's school work, and parents' reaction to children's poor or good grades. These questions indicate three parenting styles: Authoritarian, Authoritative and Permissive. There are 52 questions in SFQ on this area.

(3) Adolescents' Involvement in their school work - This

includes a question on the student's interest in specific subjects as well as time and effort put into studying and number of excused and unexcused absences.

(4) Parental Involvement in the students' school work - These items on parental involvement consist of the time and efforts parents spend in helping their children with their school work, the parents' attendance in their children's school meetings or other activities, and the support they give to their children when they get poor grades or reinforcement they provide to their children when they get good grades.

(5) Issues related to achievement and attribution - These issues include the students' self-reported grades and their feeling of either failure or success about their grades. They were also asked what grades they expect in the next year in comparison with their current grades. Their feeling of either success or failure about their grades self-assigned them to failure or success conditions and their expected grades determined their expectancy of success.

(6) Importance of Family Name and Reputation - There were three questions on the importance of family name to the students. These deal with both the importance of their school performance and family reputation in general. In the Winnipeg questionnaire, students were asked only the importance of family reputation in general.

5.2.3. Sources of Attribution

The ten sources of attribution used in this study were based on Watkins and Astilla's (1984) scale. This scale was pretested and employed in attribution research with Filipino high-school students in the Philippines. The original scale was revised by changing the object of attribution from "examination" to "subjects" because the students in the present research were asked their attributions of a semester's performance instead of just one examination.

The students were asked : "How important are the following causes in your feeling of success or failure about your grades?" (see question #24 of SFQ in the San Francisco sample, Appendix C). The students rated the importance of each cause on a five-point scale where 1= Not at all important and 5= Extremely important. The ten sources of attributions are as follows:

(1) "My ability"

(2) "How hard I tried in my subjects"

(3) "How much I prepared for the assignments"

(4) "How difficult the assignments and examinations are"

(5) "How difficult the subjects in general are"

(6) "My interest in subjects being tested"

(7) "The teachers' explanation of the material in the subjects"

(8) "The conditions at home being suitable for study"

(9) "Luck"

(10) "Fate or Destiny".

5.3. Procedure

In Winnipeg, the present study was conducted from February to August, 1989. In San Francisco, this study was conducted from September 1990 to April 1991 during the Fall and Winter terms of the schools that participated in this research. The procedure of data-gathering in each sample group will be discussed below.

5.3.1. Procedure for the Winnipeg Sample

5.3.1.1. Identifying the Participating Organizations, Churches, and Families

Various churches and community organizations were identified to participate in this study. In addition, parents who participated in an earlier parents' research were also contacted for their children to participate in this research. The following were the sources of participants in the Winnipeg sample: 4 churches, 2 organizations, 3 dance groups, 2 private schools, and about 60 families from the earlier parent research.

5.3.1.2. Obtaining the Parents' and Students' Consent to Participate

A Letter to Parents was sent through the community organization officers, church ministers and dance group leaders (see Appendix D for a copy of the Letter to Parents used in the Winnipeg sample). Those who agreed to allow their children to participate in the study were notified of the time and place of testing.

5.3.1.3. Assigning the Testing Place and Time

The place and time of testing were arranged with the heads of organizations/dance groups or ministers of the churches. In families, parents were asked their convenient time for their children to answer the questionnaires in their homes. The subjects were given about an hour to answer the questionnaires.

5.3.1.4. Administering the Questionnaires

The students were given the following instructions:

"I am a Filipino graduate student in Psychology and I am interested in knowing things about our teenagers and families in Winnipeg. I am particularly interested in finding out things about your beliefs, attitudes, and behaviors about school and family. This study will be helpful to our community, because we are a large immigrant group in Canada and yet very few studies have been done about us. You have about an hour to answer these questionnaires. If you need more time, just let me know. Please be honest with your answers. Nobody will read and know your answers. Circle the letter corresponding to your answer in each question. There is no right or wrong answer."

The students were also assured of the confidentiality and anonymity of the results of the study.

5.3.1.5. Scoring the Questionnaires

The students recorded their answers on the questionnaires. Their responses were later transferred to a computer form for

data entry to the computer for analyses. Invalid answers or those with several missing values were discarded from the data set. Invalid answers include answers such as "6" where there were only choices from "1" to "5" or 10 consecutive "yes" answers which were obviously guesses instead of well-thought of answers.

5.3.2. Procedure for the San Francisco Sample

5.3.2.1. Identifying the Participating Schools

Several schools in the San Francisco Bay Area with a large Filipino population were identified for this research. School principals were contacted as early as May 1990 for their permission. The nature, purpose, and procedures of the study were explained to them. Copies of the materials to be used in the study were also given to them. These included the Letter to Parents, the Children's Report of Parental Behavior Inventory-30, and the School and Family Questionnaire. Seven schools consisting of 4 high schools and 3 junior high/middle schools participated in this study.

5.3.2.2. Obtaining the Parents' and Students' Consent to Participate

The Letter to Parents was sent to parents for parental consent through the students in the schools (see Appendix E for a copy of the Letter to Parents used in the San Francisco sample). This was similar to the letter sent to the parents of the Winnipeg sample.

The principal explained the purposes and procedures of the study to the Filipino Club adviser and/or teachers who had a fairly good number of Filipino students in their classes. These teachers in turn explained the details of the study to their students and asked them to give to their parents the Letter to Parents.

The parents were asked their permission on two things: (1) for their child to participate in an hour's session in the school to answer the questionnaires, and (2) for the researcher to be allowed to look at their child's grades in the school records. The parents were assured that all data would be treated anonymously and confidentially. The teachers made it clear to the students that their parents should return the bottom part of the letter if their parents did not consent to their participation. Otherwise, it was assumed that they permitted their children to participate in the study.

5.3.2.3. Assigning the Testing Place and Time

The principal and/or teacher, usually the Filipino Club adviser, arranged the time and place of the survey. In most schools, it was held in the library. In others, there was a classroom designated for the research. A certain day was specified in each school for the survey depending on the availability and convenience of the students. During this day, all the seven periods were used for different groups of students to come in to answer the questionnaires.

5.3.2.4. Administering the Questionnaires

The students came to the library or assigned testing room in groups of 15-25. They were given the whole class period (i.e., 50 minutes) to answer the questionnaires. If some students needed extra time, they were allowed to stay for another 15-20 minutes. Most students, however, finished within the allotted time. They were given instructions similar to those students from Winnipeg, except that some words were changed to reflect the Filipino community in the San Francisco Bay Area instead of the Filipino community in Winnipeg.

5.3.2.5. Scoring the Questionnaires

The students recorded their answers on the questionnaires. Their responses were later transferred to a computer form for data entry to the computer for analyses. Invalid answers or those with several missing values were discarded from the data set. Again, examples of invalid answers included an answer of "6" for a question with choices from "1" to "5" or an answer of "yes" for ten consecutive questions in which the student obviously just guessed the answers.

CHAPTER 6: RESULTS

This chapter will present the statistical results of data analyses conducted in this study. The results will be discussed in the following sections:

(1) Factor analysis of CRPBI and Attribution items in the Winnipeg and San Francisco Samples;

(2) Testing the Hypotheses in the San Francisco Sample;

(3) Impact of the Demographic, Socialization, and Attribution Variables in the San Francisco and Winnipeg Samples; and,

(4) Results of the Stepwise Regression Procedure and Path Analysis in the San Francisco and Winnipeg Samples.

The factor analysis of CRPBI-30 items validated the variables of CRPBI-30. The factor analysis of the ten sources of Attribution identified three factors of Attribution that were used in the following four analyses. Thus, the information on factor analysis of the two scales will first be presented so as to describe what CRPBI dimensions and attribution factors were used in the subsequent analyses.

In the factor analyses, the data were based on both the San Francisco and Winnipeg samples. However, in testing the hypotheses, only the San Francisco sample was employed because GPA was the dependent variable in these analyses. GPA, as a measure of academic achievement, was not available for the Winnipeg sample.

Nevertheless, the impact of the demographic, socialization, and attribution variables was analyzed using the San Francisco and Winnipeg samples. Likewise, the results of the stepwise regression procedure and the path analysis were based on both the San Francisco and Winnipeg samples although the dependent variable specified for the San Francisco sample was Grade Point Average (GPA) and that for the Winnipeg sample was Student Involvement. A path-analytic model of academic achievement among Filipino adolescents was developed based on the results of path analysis. Therefore, path analysis serves as the culmination of all the analyses in this study.

6.1. Factor Analysis of the CRPBI-30 Items and the Sources of Attribution

The CRPBI-30 items were factor analyzed using the principal component solution with the varimax rotation (Gorsuch, 1983). Three factors were identified, namely: Acceptance, Psychological Control, and Lax Control. These factors are similar to the three factors/dimensions of the original CRPBI-30, which are: Acceptance, Psychological Control, and Firm Control as shown in the coefficients of congruence between the three factors (Harman, 1960). Thus, these results confirm the replicability of CRPBI-30 factors using a Filipino sample.

Furthermore, factor analysis was also conducted on the ten sources of attribution based on Watkins & Astilla's (1984) formulation. The procedure of factor analysis used was the

principal component solution with the varimax rotation (Gorsuch, 1983; Watkins & Astilla, 1984). Three factors were identified. These may be labeled as Internal Causes, Task Difficulty, and Chance. Although these factors do not exactly resemble Watkins & Astilla's 3 factors of Locus, Stability, and Controllability, these factors do share some basic similarities. These results may be considered as lending partial support to Watkins & Astilla's study as well as to Weiner's model.

6.1.1. Factor Analysis of the CRPBI-30 Items

The factor analysis of the CRPBI dimensions in the present study revealed findings that replicated the three dimensions of CRPBI-30 by Schludermann & Schludermann (1988). These results were based on the combined data of the San Francisco and Winnipeg samples. The procedure used as earlier mentioned is the principal component solution with the varimax rotation (Gorsuch, 1983). For details of the factor analysis done on CRPBI-30 dimensions, see Appendix F. Only the conclusions of these factor analyses will be presented below to save space and avoid redundancy.

The similarity of the dimensions of the original CRPBI-30 and of the combined Winnipeg and San Francisco samples were shown in their coefficients of congruence. The coefficient of congruence refers to the extent of agreement between corresponding factor weights or loadings of fixed variables in two different samples (Harman, 1960, p. 257). Although it

roughly resembles a coefficient of correlation, the coefficient of congruence is not a correlation. The coefficient of congruence differs from the product-moment correlation in that it does not use deviates from their respective means and the summations are over the n variables instead of the number of individuals. The coefficient of congruence ranges in value from +1 for perfect agreement (or -1 for perfect inverse agreement) to zero for no agreement.

The following list shows the coefficients of congruence between the six parental dimensions in the original CRPBI-30 of Schludermann & Schludermann (1988) and the combined samples of Winnipeg and San Francisco.

(1) Maternal Acceptance Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg samples: phi = +1.0, $p < .0001$;

(2) Maternal Psychological Control Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg samples: phi = +.95, $p < .0001$;

(3) Maternal Firm Control Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg samples: phi = -.85, $p < .0001$;

(4) Paternal Acceptance Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg samples: phi = +.98, $p < .0001$;

(5) Paternal Psychological Control Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg

samples: phi = +.92, $p < .0001$;

(6) Paternal Firm Control Factor in the Original CRPBI-30 versus the combined San Francisco and Winnipeg samples: phi = -.82, $p < .0001$;

The two dimensions of Acceptance and Psychological Control are almost the same in both the Schludermann & Schludermann's (1988) version and the combined San Francisco and Winnipeg versions. The items consisting of these two dimensions are exactly the same in Acceptance and vary in one or two items in Psychological Control, both in the Mother's and Father's Forms. However, for Firm Control, the direction of Control in Schludermann & Schludermann's (1988) version is positive while in the combined San Francisco and Winnipeg sample, the direction is negative.

The Parental Lax Control factor of the present study is equivalent to the CRPBI's Firm Control dimension. However, the difference lies in the direction of control. While Firm Control is negative, Lax Control is positive. That is, in Firm Control, parents do not allow their children to do certain things, whereas with Lax Control they are permissive with their children when it comes to doing some things. For instance, Item 24 states that "my mother lets me go any place I please without asking." With a mother's Firm Control, she would not let the child go any place s/he wants. With Lax Control, the mother would let the child go anywhere s/he wants.

6.1.2. Factor Analysis of the Sources of Attribution

Factor analysis on Watkins and Astilla's (1984) 10 sources of attribution was conducted on the San Francisco and Winnipeg samples, separately and combined. Further, the gender and age differences of the samples were considered. Thus, the responses of the San Francisco and Winnipeg boys versus girls and young versus old adolescents were factor analyzed. The procedure of factor analysis consisted of the principal component solution with the varimax rotation (Gorsuch, 1983).

Three factors were identified in the present study. Factor 1 may be labeled as Internal Causes, Factor 2 is Task Difficulty and Factor 3 may be called Chance. These factors were consistently revealed in the three samples, i.e., Winnipeg only, San Francisco only, and combined Winnipeg and San Francisco samples.

6.1.2.1. Factor 1 or Internal Causes

Six items constitute Factor 1. These items are as follows:

(1) My Ability (Internal, Stable, Not Controllable);

(2) How hard I tried (Internal, Unstable, Controllable);

(3) How much I prepared (Internal, Unstable, Controllable);

(4) Interest in subjects (Internal, Stable, Controllable);

(5) Teachers' explanation (External, Stable, Controllable);

(6) Home conditions for studying (External, Unstable, Controllable).

Four of these items are Internal, five are Controllable, and

three are Stable. The factor loadings of these items are compared in the three different samples used in this study: the San Francisco students only, the Winnipeg students only, the combined San Francisco and Winnipeg students. Table 3 below presents a comparison of the factor loadings in these three samples.

Furthermore, the eigenvalues of Factor 1 are: San Francisco sample = 3.93, Winnipeg sample = 3.52, and combined San Francisco and Winnipeg sample = 3.73. These eigenvalues are greater than 1.00 and thus, satisfy the eigenvalue criterion. The proportions of variance accounted for in each sample are: San Francisco sample= 39%, Winnipeg sample= 35%, combined San Francisco and Winnipeg sample= 37%.

TABLE 3

Factor Loadings of the Items Comprising Factor 1 or Internal Causes based on the San Francisco Sample, the Winnipeg Sample, and the combined San Francisco and Winnipeg Sample

	Factor Loadings in the 3 Samples		
Factor 1 Items	San Francisco Only (N=535)	Winnipeg Only (N=400)	Combined (N=935)
Teachers' Explanation	.79	.64	.71
My Ability	.66	.65	.66
How Hard I tried	.54	.72	.66
How Much I prepared	.58	.66	.65
Interest in the subjects	.62	.62	.63
Conditions at home	.63	.67	.65

6.1.2.2. Factor 2 or Task Difficulty

Two items comprise Factor 2. These items were consistently demonstrated in the three different samples of San Francisco, Winnipeg, and combined San Francisco and Winnipeg. Both items refer to the Difficulty of Task or Material. These are : Difficulty of examinations and Difficulty of materials. The factor loadings of these two items are listed in Table 4. These were compared in the 3 kinds of samples used in this study's factor analysis of attributions.

TABLE 4

Factor Loadings of the Items Comprising Factor 2 or Task Difficulty in the San Francisco Sample, the Winnipeg Sample, and the combined San Francisco and Winnipeg Sample

	Factor Loadings in the 3 Samples		
Factor 2 Items	San Francisco Only (N=535)	Winnipeg Only(N=400)	Combined (N=935)
Difficulty of examinations	.83	.84	.85
Difficulty of materials	.77	.82	.80

The eigenvalues of Factor 2 are all greater than 1.00 in the 3 samples studied. These eigenvalues are: in the San Francisco sample = 1.49, in the Winnipeg sample = 1.42, in the combined San Francisco and Winnipeg sample = 1.49. The proportions of variance accounted for by Factor 2 are: in the San Francisco sample = 15%, in the Winnipeg sample = 14%, in the combined San Francisco and Winnipeg sample = 15%.

6.1.2.3. Factor 3 or Chance

Two items comprise Factor 3 or Chance. These are: Luck and Fate or Destiny. These two items loaded significantly on Factor 3 in all three sample used in the study. Table 5 lists the factor loadings of these items in the three samples, i.e., Winnipeg only, San Francisco only, and combined Winnipeg and San Francisco samples.

TABLE 5

Factor Loadings of the Items Comprising Factor 3 or Chance in the San Francisco Sample, the Winnipeg Sample, and the combined San Francisco and Winnipeg Sample

	Factor Loadings in the 3 Samples		
Factor 3 Items	San Francisco Only (N= 535)	Winnipeg Only(N=400)	Combined (N= 935)
Luck	.89	.86	.88
Fate/Destiny	.88	.85	.87

The eigenvalues of Factor 3 are equal to or almost equal to 1.00. In the San Francisco sample, it is .90; in the Winnipeg sample, it is 1.03; and in the combined San Francisco and Winnipeg sample, it is .94. In terms of the proportion of variance accounted for, these are: in the San Francisco sample = 9%, in the Winnipeg sample = 10%, in the combined San Francisco and Winnipeg sample = 9%. However, these proportions of variance are low values.

6.1.3. Summary on the Factor Analyses of CRPBI-30 and Sources of Attribution

The principal component solution with varimax rotation was used to factor analyze the CRPBI-30 dimensions from Schludermann & Schludermann (1988) and the ten sources of attribution from

Watkins & Astilla (1984). Three factors were identified in the CRPBI-30 parenting dimensions. These factors are Acceptance, Psychological Control and Firm Control in the separate Mother's and Father's Forms. The coefficients of congruence of these dimensions show that the Filipino sample from the combined San Francisco and Winnipeg samples resemble the original CRPBI-30.

Regarding the ten sources of attribution that were factor analyzed, three factors were identified: Internal Causes, Task Difficulty, and Chance. Although not completely resembling the factors identified by Watkins and Astilla (1984), these factors lend support to Weiner's (1986) model contending that there are three dimensions of attribution.

6.2. Testing the Hypotheses in the Present Study using the San Francisco Sample

Nine sets of hypotheses totalling 16 individual hypotheses were formulated in this study. The data used for the hypotheses testing were based on the San Francisco sample only because GPA was the dependendent variable and it was available only in the San Francisco sample. Hypotheses 3a, 8, and 9 were supported. Partial support was shown for hypothesis 1a & 6c. The rest of the hypotheses were not supported.

6.2.1. Hypothesis 1a and 1b: The Adolescents' Gender and their Perceived Parenting Practices

It was predicted in Hypothesis 1a that females will have higher scores on perceived Maternal Acceptance, Psychological Control, and Firm Control than males whereas, Hypothesis 1b predicted that males will have higher scores on perceived Paternal Acceptance, Psychological Control and Firm Control than females. A high score was defined as that which was above the neutral score of 20. The CRPBI scores ranged from 10 (minimum) to 30 (maximum). Partial support was given for Hypothesis 1a because a higher score for females on Maternal Firm Control was obtained. See Table 6 below.

TABLE 6

Mean Scores of Boys and Girls on the CRPBI Dimensions

CRPBI Dimensions	Mean Score of Boys (N=251)	Standard Deviation	Mean Score of Girls (N=284)	Standard Deviation
Maternal Acceptance	21.05	4.39	20.67	5.30
Paternal Acceptance	20.03	5.27	19.60	5.84
Maternal Firm Control	20.22	3.59	21.45	3.82
Paternal Firm Control	20.46	3.83	21.49	4.19
Maternal Psychological Control	19.12	3.87	19.22	4.11
Paternal Psychological Control	18.54	4.29	18.18	4.60

Note: N = 535, Minimum Score: 10, Neutral Score: 20, Maximum Score: 30.

An analysis of variance of Gender on the CRPBI dimensions reveals that the Gender of students is a significant predictor of Maternal Firm Control, i.e., F (1, 533) = 15.69, $p < .0001$, omega-squared =.03. However, Paternal Firm Control is also significant at $p < .01$, i.e., F (1, 533) = 9.52, omega-squared = .01. Table 7 summarizes these data.

The omega-squared value indicates the size or magnitude of an effect (Maxwell, S.E., Camp, C.J., & Arvey, R.D.,1981, p. 530). It ranges from 0 to +1.00, and should be at least +.01 to be considered significant. It is a good index of the proportion

of variance accounted for because it is independent of the sample size.

TABLE 7

F-Values of Boys versus Girls on the CRPBI Dimensions

CRPBI Dimensions	F-Values
Maternal Acceptance	0.68
Paternal Acceptance	0.72
Maternal Firm Control	15.69***
Paternal Firm Control	9.52*
Maternal Psychological Control	0.18
Paternal Psychological Control	0.66

Note: N = 535, degrees of freedom = 1, 533,
*** = significant at $p < .0001$, * = $p < .01$.
The omega-squared value of Maternal Firm Control is .03 and of Paternal Firm Control is .01.

6.2.2. Hypotheses 2a & 2b: The Adolescents' Age and Perceived Parenting Practices

Hypothesis 2 states that older adolescents will have higher scores on perceived Parental Acceptance and Psychological Control than younger adolescents, and that younger adolescents will have a higher score on perceived Firm Control than older adolescents. The results did not support this hypothesis. Tables 8 and 9 below give a detailed description of these results, namely: the scores of young versus old adolescents on the CRPBI dimensions

and their F values on the CRPBI dimensions.

TABLE 8

Mean Scores of Young and Old Adolescents on the CRPBI Dimensions

CRPBI Dimensions	Mean Scores of Young Adolescents (N=288)	Standard Deviation	Mean Scores of Old Adolescents (N=247)	Standard Deviation
Maternal Acceptance	21.10	4.63	20.62	5.19
Paternal Acceptance	19.97	5.69	19.71	5.45
Maternal Firm Control	21.30	3.45	20.37	4.04
Paternal Firm Control	21.27	3.79	20.69	4.34
Maternal Psychological Control	19.39	3.95	18.95	4.04
Paternal Psychological Control	18.19	4.41	18.54	4.53

Note: N = 535. Minimum Score: 10, Neutral Score: 20, Maximum Score: 30.

An analysis of variance of Age on the CRPBI dimensions revealed no significant results at $p < .0001$. However, Maternal Firm Control is significant at $p < .005$, i.e., $F(1, 533) = 8.12$. Its omega-squared value is .01. Table 9 shows these F values.

TABLE 9

F-Values of Young versus Old Adolescents on the CRPBI Dimensions

CRPBI Dimensions	F-Values	Omega-squared
Maternal Acceptance	1.26	<.000
Paternal Acceptance	0.22	<.000
Maternal Firm Control	8.12*	.01
Paternal Firm Control	2.80	<.000
Maternal Psychological Control	1.69	<.000
Paternal Psychological Control	0.72	<.000

Note: N = 535. degrees of freedom = 1, 533,
* = significant at $p < .01$.

6.2.3. Hypothesis 3a & 3b: Parental Acceptance, Parental Psychological Control and Academic Achievement

Hypothesis 3a is as follows: In general, the adolescents with good grades have a moderate-to-high score on perceived parental Acceptance. Assuming that this hypothesis is supported, Hypothesis 3b postulates that: Adolescents who score high on perceived Parental Psychological Control will have higher grades than those who score low on perceived Parental Psychological control.

High scores are above 20 and low scores are 19 and below. A correlational analysis of the separate maternal and paternal dimensions did not yield any significant correlations between Maternal Psychological Control & GPA, i.e., $r = -.17$, $p < .13$,

and Paternal Psychological Control & GPA, i.e., $r = +.07$, $p < .12$. Thus, a different approach was tried by combining Paternal and Maternal dimensions and categorizing them into three levels: low, medium, and high.

An analysis of variance was done with GPA as the dependent variable and the three combined parental dimensions as the independent variables (i.e., Parents' Acceptance, Parents' Firm Control, Parents' Psychological Control). The significant predictors of GPA were found to be Parental Acceptance, i.e., F (2, 532) = 8.04, $p < .0004$, omega-squared = .03, and Parents' Psychological Control, i.e., F (2, 532) = 7.99, $p < .0004$, omega-squared = .03. Parents' Firm Control was also found significant at a high probability level, i.e., F (2, 532) = 6.08, $p < .01$, omega-squared = .02. The F values of these parenting dimensions are listed below in Table 10.

TABLE 10

F-Values of the CRPBI Parents' Dimensions on GPA

CRPBI Dimensions	F Values	Omega Squared
Parents' Acceptance	8.04**	.03
Parents' Firm Control	6.08*	.02
Parents' Psychological Control	7.99**	.03

Note: N = 535. ** = significant at $p < .001$, * = $p < .01$.

These results gave evidence to Hypothesis 3a in that Parental Acceptance significantly affected the adolescents' grades. Hypothesis 3a was further supported when Scheffe's post-hoc comparison was done and the differences of means between the Parental Acceptance groups were significant at $p < .01$. More specifically, t for the difference of High Acceptance > Low Acceptance = 31.96.

It is interesting to note, however, that the reverse direction was seen in Psychological Control groups, i.e., Low Psychological Control > High Psychological Control: $t = 54.42$, $p < .01$ and Medium Psychological Control > High Psychological Control: $t = 45.09$. $p < .01$. Further, there were no differences between the means of the Firm Control groups.

However, Hypothesis 3b was not supported. The interaction effects between Parental Acceptance and Parental Psychological Control were investigated and the results indicated that the interaction effects were not significant. The F-values ranged from 0.52 to 1.23.

6.2.4. Hypothesis 4: Parental Firm Control and Academic Achievement

It was predicted in Hypothesis 4 that adolescents who have a high score on perceived Parental Firm Control will have lower grades than those who have a low score on perceived Parental Firm Control. This hypothesis was not confirmed. On the contrary, Maternal Firm Control was found to have a positive correlation

coefficient of +.14, $p < .0008$. Table 11 below gives a summary of the correlation coefficients between GPA and the 6 CRPBI dimensions. In addition, the analysis of variance using combined maternal and paternal dimensions cited in the preceding section also revealed no significant differences among the combined Parental Firm Control groups.

TABLE 11

Correlation Coefficients between GPA and the CRPBI Dimensions

CRPBI Dimensions	Correlation Coefficient
Maternal Acceptance	+.07
Paternal Acceptance	+.10*
Maternal Firm Control	+.14**
Paternal Firm Control	+.07*
Maternal Psychological Control	-.07
Paternal Psychological Control	-.13*

Note: $N = 535$. ** = significant at $p < .001$, * = $p < .01$.

6.2.5. Hypothesis 5a & 5b: Academic Socialization and Academic Achievement

In Hypotheses 5a & 5b, Academic Socialization based on Dornbusch's classification was correlated with GPA. The following were predicted: (5a) Adolescents who score high on Authoritarian academic socialization will have higher grades than those who have a low score on Authoritarian academic

socialization. and, (5b) Adolescents who score high on Permissive academic socialization will have lower grades than those who have a low score on Permissive academic socialization.

Correlational analysis did not show any significant associations between GPA and Dornbusch's academic parenting style at $p < .0001$. Thus, Hypothesis 5a was not supported. On the contrary, the results of this study suggest that Authoritarian academic socialization was negatively correlated with GPA, i.e., $r = -.11$, $p < .009$. Nevertheless, Hypothesis 5b was confirmed at $p < .01$. That is, adolescents who have parents with a Permissive academic socialization have lower grades than those who did not experience Permissive academic socialization. Table 12 below shows these correlation coefficients.

TABLE 12

Correlation Coefficients between GPA and Academic Socialization Styles

Socialization Styles	Correlation Coefficients
Authoritarian Style	-.1126**
Permissive Style	-.1071*
Authoritative Style	+.1045

Note: N = 535. ** = significant at p <.001, * = p <.01.

6.2.6. Hypothesis 6a, 6b, 6c, & 6d: The Locus, Stability, and Controllability of Attributions and Academic Achievement

There were four sets of predictions in hypothesis 6. All these concerned Attributions and GPA. Hypothesis 6a states that adolescents who attribute success in school achievement to Internal, Stable, and Controllable causes (i.e, those who give higher ratings to Interest in the courses being tested than other causes) will have higher grades than those who attribute Success in Academic Achievement to External, Unstable, and Not Controllable causes. There was no significant correlation between GPA and Interest in the subjects. However, GPA was found to be significantly correlated with three sources of Attribution, namely: "My Ability", i.e., r = +.23, "How hard I tried", i.e., r = +.21, and "How much I prepared", i.e., r = +.25, with p <.0001 for the three correlation coefficients.

This hypothesis was simplified by testing the relationship between Internal Causes and GPA. There were four items in Internal Causes. These were: "My Ability", "How hard I tried", "How much I prepared", and "Interest in the Subjects". Except for "Interest in the Subjects", the three other Internal Causes had significant correlation coefficients with GPA. Thus, it can be inferred that attribution to Internal Causes is positively associated with GPA in success condition. The correlation coefficients between GPA and the sources of Attribution are shown in Table 13.

TABLE 13

Correlation Coefficients between GPA and Attribution in Success Condition

Attribution Items	Correlation Coefficients
My Ability (Internal, Stable, Not Controllable)	+.23***
How hard I tried (Internal, Unstable, Controllable)	+.21***
How much I prepared (Internal, Unstable,Controllable)	+.25***
Difficulty of examinations (External, Stable, Not Controllable)	+.12
Difficulty of Material (External, Stable, Not Controllable)	+.10
Interest in Subjects (Internal, Stable,Controllable)	+.12
Teachers' Explanation (External, Stable,Controllable)	+.14*
Home Conditions for Studying (External, Unstable,Controllable)	+.16*
Luck (External, Unstable, Not Controllable)	-.06
Fate or Destiny (External, Unstable, Not Controllable)	-.16

Note: N = 348. *** = significant at $p < .0001$, * = $p < .01$.

In Hypothesis 6b, it was predicted that adolescents who attribute failure in school achievement to External, Unstable, and Not Controllable causes (i.e., Luck and Fate/Destiny) will have higher grades than those who attribute failure in school achievement to Internal, Stable and Controllable causes (i.e,

Interest in the subjects being tested.) Hypothesis 6b was not supported, i.e., $r = .13$, $p < .07$. When this hypothesis was simplified by looking only at the correlation between External causes and GPA, the same finding was confirmed. That is, Attribution of Failure to External Causes was not associated with GPA, i.e., r values ranged from -.01 to +.17,the p values ranged from .84 to .02. Table 14 lists these correlation coefficients.

TABLE 14

Correlation between GPA and Attribution in Failure Condition

Attribution Items	Correlation Coefficients
My Ability	+.09
How hard I tried	+.21*
How much I prepared	+.21*
Difficulty of examinations	+.04
Difficulty of material	+.05
Interest in the subjects	+.13
Teachers' explanation	+.12
Home conditions for studying	+.17
Luck	-.01
Fate or Destiny	-.05

Note: $N = 187$. * = significant at $p < .01$.

Hypotheses 6c and 6d examined the Stability dimension alone in the Success and Failure conditions separately. Hypothesis 6c is as follows: Adolescents who attribute Success in school

achievement to Stable causes have higher grades than those who attribute success to Unstable causes. Based on the results of Table 13 presented above, this prediction was only partially confirmed. That is, the attribution to "My Ability" was the only stable cause found to be positively associated with GPA, i.e., $r = +.23$, $p < .0001$.

In addition, it was hypothesized in Hypothesis 6d that adolescents who attribute Failure in school achievement to Unstable causes have higher grades than those who attribute Failure to Stable causes. This prediction was not supported. Table 14 above summarizes the correlation between GPA and attributions in Failure condition and none of the attributions was demonstrated to be associated positively with GPA.

6.2.7. Hypothesis 7: Expectancy of Success and Academic Achievement

The correlation between Expectancy of Success and GPA was examined as well. According to hypothesis 7, adolescents who attribute Success in school achievement to Stable causes will expect higher grades in the next term compared to currently obtained grades than those who attribute Success in school achievement to Unstable causes. This prediction did not receive any support. Table 15 summarizes these findings as shown below.

Even when the hypothesis was modified by examining the attribution to Internal Causes as affecting Expectancy of Success, it was found that none of the Internal Causes of

attribution was related to Expectancy of Success. It appears then that Attribution, in general, is not associated with Expectancy of Success. That is, there is no relationship between the cause that students perceive to be the reason for their academic success or failure and their belief as to whether they would succeed or fail in school in the future, in this case, their grades in the next semester.

TABLE 15

Correlation Coefficients between Expectancy of Success and the Ten Sources of Attribution

Attribution Items	Correlation Coefficients	p-Level
My Ability	+.06	.17
How hard I tried	-.004	.93
How much I prepared	+.07	.13
Difficulty of examinations	+.06	.18
Difficulty of material	+.05	.29
Interest in subjects	+.08	.08
Teachers' explanation	+.10	.02
Home Conditions	+.09	.03
Luck	+.05	.23
Fate or Destiny	+.07	.12

Note: N = 535.

6.2.8. Hypothesis 8: Student Involvement and Academic Achievement

In Hypothesis 8, it was predicted that adolescents who score high on Student-Involvement items in the "School and Family Questionnaire" have higher grades than those who score low on Student-Involvement items. This hypothesis was confirmed. Table 16 below shows these findings.

TABLE 16

Correlation Coefficients between Student Involvement in Five Academic Subjects, Overall Student Involvement, and GPA

Subjects	Correlation Coefficients
Involvement in Mathematics	+.37***
Involvement in English	+.37***
Involvement in Social Studies	+.33***
Involvement in Science	+.31***
Vocational course Involvement	+.11
Overall Student Involvement	+.37***

Note: N = 535. *** = significant at $p < .0001$.

The correlation between Student Involvement and other variables was also examined. Significant positive correlation coefficients were found between Student Involvement and the following variables:

(1) Dornbusch's Authoritative Style

(r = .25, $p < .0001$);

(2) 8 sources of attribution except "Fate/Destiny" and "Luck", i.e., "My Ability" (r = .27, p < .0001), "How hard I tried" (r = .34, p < .0001), "How much I prepared" (r = .32, p < .0001), "Difficulty of examinations" (r = .12, p < .005), "Difficulty of materials" (r =.18, p < .0001), "Interest in the subjects" (r = .29, p < .0001), "Teachers' explanation" (r = .32, p < .0001), "Home conditions for studying" (r = .31, p <.0001);

(3) Internal Causes (r = .44, p < .0001);

(4) Task Difficulty (r = .17, p < .0001);

(5) Importance of Reputation in General (r = .26, p < .0001);

(6) Importance of Family Reputation in relation to school performance (r = .21,p < .0001);

(7). It is also interesting to note that there is a significant negative correlation between Student Involvement and Dornbusch's Permissive academic socialization style, i.e., r = -.25, p < .0001.

Furthermore, Parental Involvement in the students' school work was also examined in terms of its correlation with important variables. Parental Involvement is defined as the time and efforts spent by parents in helping their children do their homework, attending school meetings or being part of the students' school activities and work, supporting students when they get poor grades and reinforcing them when they get good

grades. Parental Involvement was found to have a significant positive correlation with the following variables:

(1) CRPBI parenting dimensions: Maternal Acceptance (r = .28, p < .0001), Paternal Acceptance (r = .20, p < .0001), Maternal Psychological Control (r = .20, p <.0001), Paternal Psychological Control (r = .22, p < .0001), Maternal Firm Control (r = .13, p < .003), Paternal Firm Control (r = .14, p < .001);

(2) Dornbusch's Authoritative style (r = .66, p < .0001) and Authoritarian Style (r = .61, p < .0001);

(3) Ten sources of attribution. These are: "My Ability", (r = .21, p < .0001), "How hard I tried" (r = .24, p < .0001), "How much I prepared" (r = .17, p < .0001), "Difficulty of examinations and assignments" (r = .16, p < .0002), "Difficulty of subjects" (r = .22, p < .0001), "Interest in the subjects" (r = .13, p < .0001), "Teachers' Explanation" (r = .18, p < .0001), "Home Conditions" (r = .18, p < .0001), "Luck" (r =.18, p < .0001), "Fate or Destiny" (r = .14, p < .0001);

(4) Three factors of attribution: Internal Causes (r =.26, p < .0001), Task Difficulty (r = .21, p < .0001), Chance (r = .17, p < .0001);

(5) Importance of Family Reputation: in general (r = .46, p < .0001) and in relation to school

performance (r = .45, p < .0001);

(6) The only negative correlation of Parental Involvement was found to be with Dornbusch's Permissive Style, i.e., r = -.54, p < .0001.

Furthermore, the correlation between Student and Parental Involvement is positive and significant, i.e., r = +.20, p < .0001.

6.2.9. Hypothesis 9: The Students' Gender and Academic Achievement

The prediction that females have higher grades than males was confirmed in the present study. In addition, it was also found that younger adolescents (ages 11-15) have higher grades than older adolescents (ages 16-19). An analysis of variance on GPA with Gender and Age of subjects as the independent variables was conducted to test hypothesis 9. The F-values of the main effects are shown in Table 17 below. Further, both omega-squared values were greater than .01, thus they indicate that the magnitude of the effect is significant.

TABLE 17

F-Values of Analysis of Variance on the Main Effects of Gender and Age of Subjects and GPA

Gender and Age of Subjects	F-Values	Omega Squared
Gender (Boys versus Girls)	24.67***	.040
Age (Young versus Old)	21.18***	.036

Note: N = 535. degrees of freedom = 1, 533,
*** = significant at $p < .0001$.

6.2.10. Summary of the Tested Hypotheses

Three hypotheses were clearly supported in this study:

(1) Hypothesis 3a: In general, the adolescents with good grades have a moderate-to-high score on perceived parental Acceptance.

(2) Hypothesis 8: Adolescents who score high on Student-Involvement items in the "School and Family Questionnaire" have higher grades than those who score low on Student-Involvement items.

(3) Females have higher grades than males.

Furthermore, partial support was received for two hypotheses:

(4) Females will have higher scores on perceived Maternal Acceptance, Psychological Control and Firm Control than males, in which it was shown that females had a significantly higher score in Maternal Firm Control than males.

(5) Adolescents who attribute Success in school achievement to Stable causes have higher grades than those who attribute Success to Unstable causes, wherein the attribution to one stable cause "My Ability" was positively associated with GPA.

6.3. Impact of the Demographic, Socialization and Attribution Variables in the San Francisco and Winnipeg Samples

In order to look more closely at the impact of the demographic, socialization, and attribution variables in the San Francisco and Winnipeg samples, several important variables were tabulated in terms of their frequency counts and percentages. Furthermore, additional variables were considered such as Family Type, Rearing Typology, and Importance of Family Reputation. These variables were tabulated and analyzed using both the San Francisco and Winnipeg samples. There are three major sections to be presented below, namely: (1) Family type and the other variables; (2) Rearing typology and the other variables; and, (3) Attributions and the other variables.

6.3.1. Family type and Its Relationship with other Variables

Family type was defined in terms of the education of parents and family intactness. The Education of both Mother and Father was classified as either low or high. "Low Education Level" means that both mother and father have not finished a four-year

Bachelor's degree. These included any of the following categories: (1) not a high-school graduate, (2) high-school graduate, (3) vocational-or-trade school graduate, (4) some college. "High Education Level", on the other hand, was defined as both parents having finished at least a 4-year Bachelor's degree. This might also include taking or finishing a graduate or professional degree such as M.A., Law or Medicine.

In the San Francisco sample, the "Family's Intactness" referred to the situation in which both biological parents were living together in the San Francisco Bay Area and their child lived with them. Those whose family was "Not Intact" would be in any of the following situations: (1) one parent was deceased, (2) the parents were separated or divorced, (3) the parents were not separated or divorced, but one was or both were in the Philippines; for those whose one parent was or both parents were in the Philippines, the adolescent lived with adult guardians in the San Francisco Bay Area, usually with relatives.

Based on the four possible combinations of parents' education and intactness, four Family Types were developed in the present study. These four family types and their frequency counts in the San Francisco sample are listed below:

(1) Low Educational Level, Intact = 250(47%)

(2) Low Educational Level, Not Intact = 114(21%)

(3) High Educational Level, Intact = 140(26%)

(4) High Educational Level, Not Intact = 31(6%)

The total number of intact families was 390 (73%); the number

of Not Intact families was 145(27%). Parents with Low Educational Level totalled 364(68%); those with High Educational Level totalled 171(32%). These 4 Family Types were examined with regard to several variables such as Rearing typology, GPA, Attributions, Student and Parental Involvement in studies, Dornbusch's Academic Socialization Styles, and Importance of Family Reputation. The following sections present findings on these relationships.

The relationship between the different variables in this research was also examined separately using the Winnipeg sample. However, there are two important differences between the Winnipeg and San Francisco samples that should be noted. Firstly, all 400 respondents from the Winnipeg sample came from Intact families.

Thus, Family Structure in terms of Intactness and Parental Education did not apply to Winnipeg sample. As a result of this, Parental Education was the only variable used in describing family background/structure in the Winnipeg sample. In the Winnipeg sample, 244 or 61% had Low Parental Education Level and 156 or 39% had High Parental Education Level. The total number of respondents in the Winnipeg sample was 400.

Secondly, the actual GPA's of Winnipeg students were not available. Instead, the students were asked to report their grades. Unfortunately, most students who volunteered for this study reported either B's or A's. Only a few students reported C's, D's, and F's. Therefore, the distribution of the reported grades was very uneven, with a greater proportion of good

students (B's and A's) than average or failing students. On this basis, the reported grades were, thus, not considered a valid measure of the students' academic performance.

In addition, there was a low correlation between the students' reported grades and the actual GPA's. In the San Francisco sample where GPA's were obtained and students also reported their grades as well, a low correlation coeffient of .38 was shown. Thus, whenever the analyses conducted in this research used GPA as a dependent variable, the Winnipeg sample is not included in these analyses.

6.3.1.1. Family Type and Rearing Typology in the San Francisco Sample

The 6 parental dimensions of CRPBI were used to develop 4 Rearing Typologies. The CRPBI scores on the Mothers' and Fathers' Forms were combined into one parental score because of the high correlations between the Mothers' and Fathers' dimensions, therefore, narrowing the parenting dimensions into three: Parental Acceptance, Parental Psychological Control, and Parental Firm Control.

These three parental dimensions were further categorized into low and high with the median score as the cut-off point. That is, scores below the median were considered low and scores above the median were considered high. The Parental Psychological Control and Parental Acceptance dimensions of CRPBI were combined to come up with four Rearing Typologies:

Dictatorial (Low Acceptance & High Control), Inductive (High Acceptance & High Control), Indulgent (High Acceptance & Low Control), and Indifferent (Low Acceptance & Low Control).

Psychological Control, not Firm Control, was employed as the criterion in defining Rearing Typology because Parental Psychological Control was most independent of Parental Acceptance as shown in the correlation coefficient of these 2 variables (r = .1045, p < .0156) versus the correlation coefficient of Parental Firm Control and Parental Acceptance (r = -.2009, p < .0001). The frequencies of the four rearing typologies are tabulated below:

(1) Dictatorial : n = 108/20%;

(2) Inductive : n = 166/31%;

(3) Indulgent : n = 131/25%;

(4) Indifferent : n = 130/24%.

Table 18 shows the frequency counts and percentages of the four rearing typologies on the four family types in the San Francisco sample.

TABLE 18

Frequencies of the Four Family Types on the Four Rearing Typologies in the San Francisco Sample

Family Types	Dictatorial	Inductive	Indulgent	Indifferent
Low Education, Intact (n = 250/47%)	49(20%)	84(34%)	54(22%)	63(25%)
Low Education, Not intact (n = 114/21%)	25(22%)	30(26%)	27(24%)	32(28%)
High Education, Intact (n = 140/26%)	28(20%)	46(33%)	37(26%)	29(21%)
High Education, Not intact (n = 31/6%)	6(19%)	6(19%)	13(42%)	6(19%)
N = 535/100%	n=108/21%	n=166/31%	n=131/24%	n=130/24%

Note: N = 535. Chi-squared for Parental Education = 3.88, p = .27, Chi-squared for Family Intactness = 3.05, p= .08.

According to the most frequent typology, Low-Education, Intact families were characterized by Inductive rearing (34%). Low-Education, Not-Intact families were characterized by Indifferent rearing (28%). High-education, Intact families were characterized by Inductive rearing (33%). High-education, Not-Intact families were characterized by Indulgent rearing (42%).

It can be inferred from these findings that Intactness was the main variable influencing Rearing Typology. Intact families, whether with low or high education, had Inductive rearing

typology as the most frequent parenting style. Not-intact families, on the other hand, employ either Indulgent or Indifferent rearing styles. None of the family type is characterized mainly by the Dictatorial Rearing Typology. However, when looking at the Dictatorial style and where it most frequently occured, it was found to rank next to Indifferent style as a rearing typology in families where the parents had Low Education and were Not Intact (22%).

However, these data were only descriptive. The chi-squared values did not show any significant effects of either Parental Education or Intactness on Rearing Typology, i.e., $\underline{X}$ values were from 3.05 to 3.88, $\underline{p}$ values ranged from .08 to .27.

6.3.1.2. Parental Education and Rearing Typology in the Winnipeg Sample

Parental Education and the four Types of Rearing were likewise tabulated in the Winnipeg sample. The four Rearing types were: Dictatorial, Inductive, Indulgent and Indifferent. The definitions of the four Rearing Typologies were the same as those in the San Francisco sample.

The frequency distribution of the four rearing typologies in the Winnipeg sample was as follows: Inductive = 123 (31%), Dictatorial = 103 (26%), Indulgent = 94 (23%), and Indifferent = 80 (20%). Table 19 shows the frequencies of Parental Education on the four Rearing Typologies in the Winnipeg sample.

TABLE 19

Frequencies of the CRPBI Rearing Typologies

on Parental Education in the Winnipeg Sample

Parental Education	Dicta-torial	Induc-tive	Indul-gent	Indif-ferent
Low Education (n = 244/61%)	67(27%)	71(29%)	51(21%)	55(23%)
High Education (n = 156/39%)	36(23%)	52(33%)	43(28%)	25(16%)
N = 400/100%	n=103/26%	n=123/31%	n=94/23%	n=80/20%

Note: N = 400. Chi-squared for Parental Education = 5.08, p = .17.

From the above table, it appeared that the largest proportion of Winnipeg sample had Inductive parents, regardless of Parental Education (with Low Education = 29%, and with High Education = 33%). Students with Highly Educated parents were also found to have a high frequency of Indulgent parents (28%). However, the chi-squared value was not significant, i.e., 5.08. Thus, there were no differences among Low and High Education groups in the Winnipeg sample in terms of their Rearing Typology.

6.3.1.3. Family Type and Grade Levels in San Francisco Sample

The GPA's of the students were categorized into 4 "Grade Levels" from F's & D's (poor students) to B's & A's (good students). Four Grade Levels were obtained as listed below and their frequencies in the four family types in the San Francisco sample were tabulated in Table 20 below.

(1) Grade Level is between 3 and 4.00 = B&A (good), 191/36%

(2) Grade Level is between 2 and 2.99 = C(average), 201/37%

(3) Grade Level is between 1 and 1.99 = D (poor), 117/22%

(4) Grade level is between 0 and 0.99 = F (failing) 26/5%

TABLE 20

Frequencies of the Students' Grade Levels in the Four Family Types in the San Francisco Sample

Family Types	F(Failing)	D(Poor)	C(Average)	B&A(Good)
Low Education, Intact (*n* = 250/47%)	10(4%)	71(28%)	91(37%)	78(31%)
Low Education, Not Intact(*n* = 114/21%)	7(6%)	27(24%)	47(41%)	33(29%)
High Education, Intact (*n* = 140/26%)	6(4%)	15(11%)	56(40%)	63(45%)
High Education, Not Intact (*n* = 31/6%)	3(10%)	4(13%)	7(22%)	17(55%)
N = 535/100%	*n*=26/5%	*n*=117/22%	*n*=201/37%	*n*=191/36%

Note: *N* = 535. Chi-Squared for Family Intactness= 1.81, *p* = .61, Chi-Squared for Parental Education= 22.07, *p* = .0001.

The chi-squared for Parental Education was significant but not for Family Intactness. Thus, High Parental Education was associated with higher Grade Levels. Furthermore, based on the above data, the Good or B & A students were mostly found among families where parents had High Education, whether Intact (45%) or Not Intact (55%). Average or C students, on the other hand, were found among families with parents with Low Education, both

Intact (37%) or Not Intact (41%). Thus, it seemed that Parental Education was an important variable in determining the students' Grade Levels. None of the Family Types were characterized by students who were largely Failing or Poor. However, when F's and D's were examined in terms of where they occured most, it was revealed that Low Education and Intact families had the biggest proportion of F (38%) and D (61%) students. See Table 21 below.

A two-way analysis of variance was done with Intactness and Education of Parents as independent variables and GPA as the dependent variable. It was shown that the Education of Parents affected GPA significantly, i.e., F (1,533) = 14.75, $p < .0001$, omega-squared = .02. Family Intactness, however, did not have a significant effect on GPA.

TABLE 21

Means and Standard Deviations of GPA in the Four Family Types in the San Francisco Sample

Family Types	Mean	St. Deviation
Low Education, Intact (n = 250/47%)	2.95	0.87
Low Education, Not Intact (n = 114/21%)	2.93	0.88
High Education, Intact (n = 140/26%)	3.26	0.82
High Education, Not Intact (n = 31/6%)	3.23	1.02

Note: N = 535. Minimum Score: 0, Neutral Score: 2, Maximum Score: 4.

6.3.1.4. Family Type and Attribution in the San Francisco Sample

The ten sources of attribution were factor analyzed in both the San Francisco and Winnipeg samples yielding 3 factors. These three factors were labeled as Internal Causes (Factor 1), Task Difficulty (Factor 2), and Chance (Factor 3). The means and standard deviations of these 3 factors of Attribution in the 4 Family Types in the San Francisco sample are shown below in Table 22.

An analysis of variance was conducted with the three Factors of Attribution as the dependent variable and Family Type (i.e., Parents' Education and Intactness) as the independent variable. The results of this analysis revealed that Parental-Education and Intactness had no significant effects on Internal Attribution, Task or Chance. The F-values (1, 533) ranged from 0 to 8.42 with p-values ranging from .47 to .004.

TABLE 22

Means and Standard Deviations of the Three Factors of Attribution in the Four Family Types in the San Francisco Sample

Family Types		Internal Causes	Task Difficulty	Chance
Low Education, Intact (n = 250/47%)	Mean	21.08	6.90	6.50
	St.Dev.	4.38	1.87	2.53
Low Education, Not Intact (n = 114/21%)	Mean	21.13	6.82	6.22
	St.Dev.	4.48	1.72	2.35
High Education, Intact (n = 140/26%)	Mean	22.20	7.15	6.41
	St.Dev.	4.41	1.89	2.68
High Education, Not Intact (n = 31/6%)	Mean	22.65	7.55	6.55
	St.Dev.	4.66	1.69	3.14

Note: N = 535. Minimum Score: 6 (Internal Causes), 2 (Task & Chance). Neutral Score: 18 (Internal Causes), 6 (Task & Chance). Maximum Score: 30 (Internal Causes), 10 (Task & Chance).

6.3.1.5. Parental Education and Attribution in the Winnipeg Sample

Similarly, the means and standard deviations of the three Factors of Attribution were tabulated in both the Low- and High-Education levels in the Winnipeg sample. This is presented below in Table 23.

TABLE 23

Means and Standard Deviations of the Factors of Attribution on the Levels of Parental Education in the Winnipeg Sample

Parental Education		Internal Causes	Task Difficulty	Chance
Low Education (n = 244/61%)	Mean	21.84	6.79	6.31
	St. Dev.	4.10	1.80	2.28
High Education (n = 156/39%)	Mean	22.32	6.86	6.26
	St. Dev.	4.28	1.95	2.47

Note: N= 400. Minimum Score: 6 (Internal Causes), 2 (Task & Chance); Neutral Score: 18 (Internal Causes), 6 (Task & Chance); Maximum Score: 30 (Internal Causes), 10 (Task & Chance).

Three separate one-way analyses of variance were also done with Parental Education as the independent variable and the three Factors of Attribution as the dependent variables. No significant effects were found between Parental Education and Internal Causes, Task and Chance, i.e., F (1, 388) values range from +0.98 to 1.5 and p from .15 to .45.

6.3.1.6. Family Type and Academic Socialization Styles in the San Francisco Sample

Three Academic Socialization Styles were formulated by Dornbusch et al. (1987). The means and standard deviations of each style in the San Francisco sample are shown below in Table 24.

An analysis of variance was performed separately on Family Structure and each of the three Academic Parenting styles. It was found that Parental Education significantly affected Authoritative Style, i.e., F (1, 533) = 8.15, $p < .005$, omega-squared = .01; and Permissive Style, i.e., F (1, 533) = 7.24, $p < .007$, omega-squared = .01. Intactness did not have any significant effects on any of the three Academic Socialization Styles, i.e., F-values (1, 532) ranged from 0.37 to 2.64 with p values from .10 to .54.

TABLE 24

Means and Standard Deviations of Academic Socialization Styles in the Four Family Types in the San Francisco Sample

Family Types		Authoritarian	Authoritative	Permissive
Low Education, Intact (n = 250/47%)	Mean	2.84	2.84	2.26
	St. Dev.	0.66	0.77	0.62
Low Education, Not Intact (n = 114/21%)	Mean	2.81	2.96	2.26
	St. Dev.	0.74	0.80	0.72
High Education, Intact (n = 140/26%)	Mean	2.98	2.83	2.10
	St. Dev.	0.68	0.73	0.60
High Education, Not Intact (n = 31/6%)	Mean	3.12	2.99	2.01
	St. Dev.	0.57	0.61	0.77

Note: N = 535. Minimum Score:1, Neutral Score:3, Maximum Score:5.

6.3.1.7. Parental Education and Academic Socialization Styles in the Winnipeg Sample

The means and standard deviations of Academic Socialization styles were also tabulated in both levels of Parental Education in the Winnipeg sample. Table 25 shows this information.

TABLE 25

Means and Standard Deviations of Academic Socialization Styles on Parental Education in the Winnipeg Sample

Parental Education		Authoritarian	Authoritative	Permissive
Low Education				
(n = 244/61%)	Mean	2.79	2.85	2.22
	St.Dev.	0.74	0.71	0.73
High Education				
(n = 156/39%)	Mean	2.94	3.07	2.02
	St.Dev.	0.81	0.59	0.65

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score=5.

Three one-way analyses of variance were performed with Parental Education as the independent variable and each of Academic Socialization Style as the dependent variable. The findings show that Parental Education significantly affected the Authoritative Style, i.e., F (1,398) = 9.96, p <.002, omega-squared = .02; and Permissive style, i.e., F (1, 398) = 7.58, p <.006, omega-squared = .02.

6.3.1.8. Family Type and Student and Parental Involvement in School Work in the San Francisco Sample

Student and Parental Involvement in school work were examined in relation to Family Type in the San Francisco sample and to Parental Education in the Winnipeg sample.

The means and standard deviations of Student and Parental Involvement in school work in the four family types were tabulated in the San Francisco sample. Table 26 presents this.

TABLE 26

Means and Standard Deviations of Student and Parental Involvement Scores in the Four Family Types in the San Francisco Sample

Family Types	Student Involvement Mean	Student Involvement St. Dev.	Parental Involvement Mean	Parental Involvement St. Dev.
Low Education, Intact (n = 250/47%)	3.29	0.49	2.86	0.43
Low Education, Not Intact (n = 114/21%)	3.27	0.52	2.85	0.51
High Education, Intact (n = 140/26%)	3.51	0.54	2.93	0.45
High Education, Not Intact (n = 31/6%)	3.55	0.52	2.96	0.45

Note: N = 535. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

An analysis of variance was conducted with Family Structure (i.e., Parents' Education and Intactness) as the independent

variable and Student Involvement in their school work as the dependent variable. The findings suggested that Education of Parents significantly affected Student Involvement in their school work, i.e., F (1, 533) = 18.55, $p < .0001$, omega-squared = .03. Intactness did not have significant effects on Student Involvement, i.e., F (1, 533) = 0.08, $p < .55$.

Analysis of variance was also conducted with Parental Involvement as the dependent variable and Family Type as the independent variables. Both Parental Education and Intactness had no significant effects on Parental Involvement, i.e., F (1, 533) values range from 0.03 to 3.45 with p from .06 to .86.

6.3.1.9. Parental Education and Student and Parental Involvement in the Winnipeg Sample

In the Winnipeg sample, the means and standard deviations of both Parental and Student Involvement were also tabulated in the two levels of Parental Education. Table 27 below shows these data. Also, two separate one-way analyses of variance were done with Parental Education as the independent variable and Parental Involvement and Student Involvement as the dependent variables.

The results indicated that Parental Education had a significant effect on Parental Involvement, i.e., F (1, 398) = 10.23, $p < .002$, omega-squared = .02; but not on Student Involvement (i.e., F (1, 398) = 1.58, $p < .21$). Thus, highly educated parents tended to be highly involved in their adolescents' school work. Furthermore, the correlation between

Student Involvement and Parental Involvement was also obtained. It was $r = .20$ in the San Francisco sample at $p < .0001$ and $r = .29$ in the Winnipeg sample at $p < 0001$.

The results of the analyses on Involvement scores demonstrated that Parents' Education significantly affected Student Involvement only in the San Francisco sample and Parental Involvement only in the Winnipeg sample. It appeared then that highly educated parents in San Francisco tended to have adolescents who were directly highly involved in their studies, and consequently, with higher GPA's.

Whereas, in Winnipeg, although highly educated parents tended to be highly involved with their students' school work, this did not necessarily lead to high GPA's. Thus, it is possible that highly educated San Francisco parents, although not highly involved themselves with their adolescents' school work, have learned the skill or ability to directly influence their adolescents' involvement with their school work.

However, highly educated Winnipeg parents can only go as far as being directly involved with the students school work themselves but not influencing the students to be highly involved with their school work. This may be attributed to differences in other characteristics of the sets of parents in this study which at this point were not examined.

TABLE 27

Means and Standard Deviations of Student and Parental Involvement in the Two Levels of Parental Education in the Winnipeg Sample

Parental Education	Student Involvement Mean	Student Involvement St. Dev.	Parental Involvement Mean	Parental Involvement St. Dev.
Low Education				
(n = 244/61%)	3.68	0.65	2.93	0.42
High Education				
(n = 156/39%)	3.77	0.60	3.06	0.39

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

6.3.1.10. Family Type and Importance of Family Reputation in the San Francisco Sample

In the San Francisco sample, Importance of Family Reputation was examined in two contexts: Family Reputation in relation to school Performance and Family Reputation in general. Concerning school performance, the students were asked 2 questions: how important school performance was to one's family and the extent to which one's family name may be ruined by a student being suspended or dropped out of school.

The importance of Family Reputation in general was asked: " How important is it for you to have/ keep a good family name and reputation?" and answers were rated by the students in a scale of 1-5 where 1 = not at all important and 5 = extremely important. The means and standard deviations of the Importance of Family Reputation scores are presented in Table 28 below.

TABLE 28

Means and Standard Deviations of the Ratings on Importance of Family Reputation and School Reputation in the Four Family Types in the San Francisco Sample

Family Types		School Reputation	Family Reputation
Low Education, Intact (n = 250/47%)	Mean	6.68	7.91
	St. Dev.	1.18	1.71
Low Education, Not Intact (n = 114/21%)	Mean	6.68	7.84
	St. Dev.	1.36	1.71
High Education, Intact (n = 140/26%)	Mean	6.98	8.39
	St. Dev.	1.27	1.58
High Education, Not Intact (n = 31/6%)	Mean	7.00	8.71
	St. Dev.	0.93	1.51

Note: N = 535. Minimum Score: 5, Neutral Score: 7.5 Maximum Score: 10.

The scores related to both the School and Family Reputation were combined into an overall Importance-of-Reputation score. Then a two-way analysis of variance was performed with Parental Education and Intactness as the independent variables and Importance of Reputation as the dependent variable. It was found that Parental Education significantly affected Reputation,

i.e., F (1, 533) = 10.71, $p < .001$, omega-squared = .02. Thus, students who were concerned about the family's reputation tended to have highly educated parents.

6.3.1.11. Parental Education and the Importance of Family Reputation in the Winnipeg Sample

A similar analysis was done on the Winnipeg sample. However, in the Winnipeg sample, there was only one kind of Reputation score. That is, students were asked only one question concerning the importance of reputation: " How important is it for you to keep a good family name and reputation?". The following table shows the means and standard deviations of the ratings on Importance of Reputation.

TABLE 29

Means and Standard Deviations of the Ratings on the Importance of Reputation in the Winnipeg Sample

Parental Education	Mean	St. Deviation
Low Education (n = 244/61%)	3.86	1.25
High Education (n = 156/39%)	3.99	1.14

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

A one-way analysis of variance was performed with Parental Education as the independent variable and Reputation as the

dependent variable. No significant effect of Parental Education was found, i.e., F (1, 398) = 1.1, p <.29.

6.3.1.12. Summary of the Relationships between Family Type and other Variables

The above results show the following significant relationships:

(1) Parental Education is a significant predictor of both GPA as a continuous variable and of Grades Levels (i.e., GPA divided into four levels from F's to A's.). Thus, the students whose parents have high education tend to have high GPA's.

(2) Parental Education is a significant predictor of Authoritative and Permissive Styles. Both the San Francisco and Winnipeg samples suggest this finding. That is, the higher their education, the more likely that the parents are either Authoritative or Permissive.

(3) Concerning Student Involvement and Parental Involvement, Parental Education is a significant predictor of Student Involvement in the San Francisco sample and a significant predictor of Parental Involvement in the Winnipeg sample. Thus, students in San Francisco whose parents are highly educated tend to be more involved in school whereas students in Winnipeg whose parents are highly educated tend to have parents who are involved in their school work.

(4) Parental Education significantly affects the Importance of Reputation in the San Francisco sample but not in the Winnipeg

sample. In the San Francisco sample only, students whose parents are highly educated tend to put more importance on Family Reputation. One should note, however, that there was only one question pertaining to the Importance of Family Reputation in the Winnipeg sample as opposed to three questions related to school and family Reputation in the San Francisco sample. Thus, this difference may be accounted for by the number and type of questions asked of the students.

6.3.2. Rearing Typology and its Relationship with other Variables

There were four rearing typologies developed in the present study based on the Psychological Control and Acceptance dimensions of CRPBI. An earlier section discussed how this was formulated (see Section 6.3.1.1). These four rearing typologies consisted of Dictatorial, Inductive, Indulgent and Indifferent. In the next sections, the frequencies of Grade levels, Factors of Attributions, Student and Parental Involvement in school work, Academic Socialization style, and Importance of Family Reputation on the four Rearing Typologies will be presented.

6.3.2.1. Rearing Typology and Grade Levels

Grade Levels were divided into four categories: failing (F's), poor (D's), average (C's), and very good (B's & A's) (See Section 6.3.1.3.). The frequencies are shown in Table 30 below.

TABLE 30

Frequencies of the Grade Levels on the Four Rearing Typologies in the San Francisco Sample

Rearing Typologies	F's	D's	C's	B's & A's
Dictatorial (n = 108/21%)	5(5%)	29(27%)	39(36%)	35(32%)
Inductive (n = 166/31%)	11(7%)	36(22%)	63(38%)	56(34%)
Indulgent (n = 131/24%)	6(5%)	15(11%)	49(37%)	61(47%)
Indifferent (n = 130/24%)	4(3%)	37(28%)	50(38%)	39(30%)
N = 535	n= 26/5%	n= 117/22%	n= 201/37%	n =191/36%

Note: N = 535. Chi-squared (9, 526) = 18.38, $p < .0001$.

Based on the above data in Table 30, students in each Rearing Typology had C's as the most frequently occuring GPA. However, Indulgent rearing had the most number of B's & A's (47%), followed by Inductive rearing style (34%). In addition, the largest number of poor students (F's & D's) were found among families who employed either a Dictatorial (32%) or Indifferent (31%) rearing typology.

Chi-square analysis was further done with Grade Levels as the dependent variable and Rearing Typology as the independent variable. Significant results were obtained, i.e., Rearing Typology affects Grade levels significantly. The chi-squared value as noted above is 18.38 which is significant at $p < .0001$.

Furthermore, the means and standard deviations of GPA in the four Rearing Typology were tabulated as shown in Table 31 below. An analysis of variance was done with Rearing Types as the independent variable and GPA as the dependent variable. It was demonstrated that Rearing Typology significantly affected GPA, i.e., F (3, 531) = 4.32, $p < .005$, omega-squared = .02. However, using Scheffe's method of post hoc comparison, none of the Rearing groups differed significantly at $p < .01$.

TABLE 31

Means and Standard Deviations of GPA in the Rearing Typologies in the San Francisco Sample

Rearing Typologies	Means	St. Dev.
Dictatorial (n = 108/21%)	2.96	0.89
Inductive (n = 166/31%)	2.99	0.91
Indulgent (n = 131/24%)	3.26	0.84
Indifferent (n = 130/24%)	2.95	0.84

Note: N = 535. Minimum Score: 1, Neutral Score: 2.5, Maximum Score: 4.

6.3.2.2. Rearing Typology and Attribution in the San Francisco Sample

The three factors of Attribution are Internal Causes, Task Difficulty and Chance. The means and standard deviations

of these factors of attribution in each of the four rearing typology were tabulated in the San Francisco sample. Table 32 presents this.

An analysis of variance was performed using Rearing Type as the independent variable and the three Factors of Attribution as the dependent variables. Three separate one-way analyses of variance were done with Attribution to Internal Causes, Task and Chance as the dependent variables. It was found that Rearing Typology did not significantly affect any of the three Factors of Attribution, i.e., F (3, 532) values ranged from 0.36 to 3.68 with p from < .18 to .01.

TABLE 32

Means and Standard Deviations of the Factors of Attribution in the Rearing Typologies in the San Francisco Sample

Rearing Typology		Internal Causes	Task Difficulty	Chance
Dictatorial (n = 108/21%)	Mean	20.71	7.01	6.34
	St. Dev.	4.47	1.99	2.91
Inductive (n = 166/31%)	Mean	21.75	7.06	6.74
	St. Dev.	0.91	1.69	2.29
Indulgent (n = 131/24%)	Mean	22.34	7.02	6.08
	St.Dev.	0.84	1.91	2.66
Indifferent (n = 130/24%)	Mean	20.85	6.85	6.42
	St. Dev.	4.58	1.83	2.49

Note: N = 535. Internal Causes Scores: Minimum = 6, Neutral = 18, Maximum = 30. Task Difficulty and Chance Scores: Minimum = 2, Neutral = 6, Maximum = 10.

6.3.2.3. Rearing Typology and Attribution in the Winnipeg Sample

The means and standard deviations of the three Factors of Attribution are also tabulated in each of the four Rearing Typologies in the Winnipeg sample. These are listed in Table 33.

Three separate one-way analyses of variance were conducted with the Rearing Typology as the independent variables and the Factors of Attribution as the dependent variables. It was demonstrated that Attribution to Internal Causes was

significantly affected by Rearing Typology. More specifically, in Scheffe's post-hoc comparison of Rearing-Typology groups, the following were found significant at $p < .01$: Inductive > Dictatorial: $t = 2.26$, and Indulgent > Dictatorial: $t = 2.54$.

TABLE 33

Means and Standard Deviations of the Factors of Attribution in the Rearing Typologies in the Winnipeg Sample

Rearing Typology		Internal Causes	Task Difficulty	Chance
Dictatorial (n = 103/26%)	Mean	20.62	6.47	6.35
	St. Dev.	3.85	1.92	2.43
Inductive (n = 123/31%)	Mean	22.89	6.94	6.74
	St. Dev.	4.16	1.83	2.33
Indulgent (n = 94/23%)	Mean	23.16	7.00	5.98
	St. Dev.	4.21	2.05	2.43
Indifferent (n = 80/20%)	Mean	21.16	6.85	5.89
	St. Dev.	3.89	1.54	2.13

Note: N = 400. Internal Causes Scores: Minimum = 6, Neutral = 18, Maximum = 30; Task Difficulty and Chance Scores: Minimum = 2, Neutral = 6, Maximum = 10.

6.3.2.4. Rearing Typology and Academic Socialization Styles in the San Francisco Sample

Dornbusch (1987) classified Academic Socialization Styles into three: Authoritarian, Authoritative, and Permissive. The means and standard deviations of these Academic Socialization Styles were examined in each of the four rearing styles of CRPBI. The results are presented in Table 34.

TABLE 34

Means and Standard Deviations of Dornbusch's Academic Socialization Styles on Rearing Typology in the San Francisco Sample

Rearing Typology		Authoritarian	Authoritative	Permissive
Dictatorial (n = 108/21%)	Mean	3.25	2.73	2.33
	St. Dev.	0.75	0.73	0.61
Inductive (n = 166/31%)	Mean	3.05	3.14	2.17
	St. Dev.	0.69	0.60	0.69
Indulgent (n = 131/24%)	Mean	2.56	3.04	2.04
	St. Dev.	0.71	0.63	0.54
Indifferent (n = 130/24%)	Mean	2.64	2.53	2.31
	St. Dev.	0.69	0.61	0.69

Note: N = 535. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

Furthermore, the correlation coefficients were computed between CRPBI dimensions and Dornbusch's Academic Socialization Styles. Significant positive correlations were obtained between the following variables and these are shown Table 35.

TABLE 35

Correlation Coefficients between the CRPBI Dimensions and Dornbusch's Academic Socialization Styles in the San Francisco Sample

CRPBI Dimension	Authoritarian	Authoritative	Permissive
Maternal Acceptance	-.01	+.42***	-.19***
Paternal Acceptance	-.04***	+.33***	-.18***
Maternal Psychological Control	+.43***	+.10	+.04
Paternal Psychological Control	+.35***	+.18***	+.02
Maternal Firm Control	+.32***	+.01	+.02
Paternal Firm Control	+.23***	+.07	+.05

Note: N = 535, ***= significant at $p < .0001$.

6.3.2.5. Rearing Typology and Academic Socialization Styles in the Winnipeg Sample

The means and standard deviations of Academic Socialization Styles were tabulated in each CRPBI Rearing Typology. This is presented in Table 36.

TABLE 36

Means and Standard Deviations of Academic Socialization Styles on Rearing Typology in the Winnipeg Sample

Rearing Typology		Authoritarian	Authoritative	Permissive
Dictatorial (n = 103/26%)	Mean	3.12	2.66	2.38
	St. Dev.	0.77	0.68	0.73
Inductive (n = 123/31%)	Mean	3.08	3.17	2.38
	St. Dev.	0.72	0.59	0.78
Indulgent (n = 94/23%)	Mean	2.57	3.27	1.86
	St. Dev.	0.69	0.49	0.56
Indifferent (n = 80/20%)	Mean	2.45	2.53	2.11
	St. Dev.	0.65	0.64	0.59

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

Furthermore, the six CRPBI dimensions in the Winnipeg sample were correlated with the three Academic Socialization Styles. The following significant positive correlations were obtained as shown in Table 37.

TABLE 37

Correlation Coefficients between the CRPBI Dimensions and Academic Socialization Styles in the Winnipeg Sample

CRPBI Dimension	Authoritarian	Authoritative	Permissive
Maternal Acceptance	-.05	+.49***	-.26***
Paternal Acceptance	+.02	+.42***	-.10
Maternal Psychological Control	+.43***	+.05	+.24***
Paternal Psychological Control	+.39***	+.07	+.17**
Maternal Firm Control	+.30***	-.01	-.11
Paternal Firm Control	+.27***	-.11	-.14*

Note: N = 400. *** = significant at $p < .0001$, ** at $p < .001$, * at $p < .01$.

6.3.2.6. Rearing Typology and Involvement in School Work in the San Francisco Sample

The means and standard deviations of Student Involvement and Parental Involvement are tabulated in each of the four Rearing Typologies. Table 38 summarizes this information.

TABLE 38

Means and Standard Deviations of Student and Parental Involvement for Rearing Typology in the San Francisco Sample

Rearing Typology		Student Involvement	Parental Involvement
Dictatorial (n = 108/21%)	Mean	3.31	2.98
	St. Dev.	0.51	0.46
Inductive (n = 166/31%)	Mean	3.35	3.11
	St. Dev.	0.54	0.46
Indulgent (n = 131/24%)	Mean	3.47	2.97
	St. Dev.	0.49	0.42
Indifferent (n = 130/24%)	Mean	3.31	2.76
	St. Dev.	0.54	0.48

Note: N = 535. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

Two separate one-way analyses of variance were done with Rearing Typology as the independent variable and Student and Parental Involvement as the dependent variables. The results show that Rearing Typology does not affect Student Involvement, i.e., F (3, 531) = 2.80, $p < .04$, omega-squared = .01. However, Rearing Typology was shown to have significant effects on Parental Involvement, i.e., F (3, 531) = 15.19, $p < .0001$, omega-squared = .07. Scheffe's post-hoc test among the Rearing Typology groups showed the following t-value comparisons to be significant at $p < .01$: (1) Inductive > Indifferent:

t = .35, (2) Dictatorial > Indifferent: t = .22, and, (3) Indulgent > Indifferent: t = .21.

6.3.2.7. Rearing Typology and Involvement in the Winnipeg Sample

The means and standard deviations of Student- and Parental-Involvement scores were tabulated in each of the four Rearing Typologies. These are shown in Table 39.

Two separate one-way analyses of variance were performed with Rearing as the independent variable and Student Involvement and Parental Involvement as the dependent variables. It was found that Rearing Typology has significant effects on both Student Involvement, i.e., F (3, 396) = 8.94, p < .0001, omega-squared = .06, and Parental Involvement, i.e., F (3, 396) = 15.48, p < .0001, omega-squared = .09. Scheffe's post-hoc test of Rearing Typology groups revealed the following significant comparisons at p < .01 : (1) for Student Involvement: Indulgent > Indifferent: t = .33 and Indulgent > Dictatorial: t = .44; (2) for Parental Involvement: Inductive > Indifferent: t = .38, Indulgent > Indifferent: t = .27, Dictatorial > Indifferent: t = .22.

TABLE 39

Means and Standard Deviations of Student and Parental Involvement on Rearing Typology in the Winnipeg Sample

Rearing Typology		Student Involvement	Parental Involvement
Dictatorial (n = 103/26%)	Mean	3.52	2.96
	St. Dev.	0.58	0.39
Inductive (n = 123/31%)	Mean	3.76	3.12
	St. Dev.	0.66	0.42
Indulgent (n = 94/23%)	Mean	3.96	3.01
	St. Dev.	0.63	0.36
Indifferent (n = 80/20%)	Mean	3.63	2.74
	St. Dev.	0.57	0.37

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

6.3.2.8. Rearing Typology and Importance of Family Reputation in the San Francisco Sample

The Importance of Family Reputation was considered both in the context of one's school performance and general family reputation. The means and standard deviations of both kinds of Reputation in the four types of Rearing in the San Francisco are listed in Table 40.

TABLE 40

Means and Standard Deviations of Importance of School and Family Reputation on the Four Rearing Typologies in the San Francisco Sample

Rearing Typology		School Reputation	Family Reputation
Dictatorial (n = 108/21%)	Mean	6.89	8.01
	St. Dev.	1.28	1.73
Inductive (n = 166/31%)	Mean	7.01	8.43
	St. Dev.	1.13	1.49
Indulgent (n = 131/24%)	Mean	6.69	8.08
	St. Dev.	1.16	1.77
Indifferent (n = 130/24%)	Mean	7.65	7.65
	St. Dev.	1.69	1.69

Note: N = 535. Minimum Score: 2, Neutral Score: 6, Maximum Score: 10.

An overall Reputation score was obtained using both School and Family Reputation scores and an analysis of variance was performed with the Rearing Typology as the independent variable and the Importance of Family Reputation as the dependent variable. Rearing was found to have significant effects on Reputation, i.e., F (3, 531) = 8.03, p < .0001, omega-squared = .02. Scheffe's post-hoc comparison of the four Rearing Typology

groups further indicated a significant comparison of Inductive > Indifferent: t = .38 at p < .01.

6.3.2.9. Rearing Typology and Importance of Family Reputation in the Winnipeg Sample

In the Winnipeg sample, there was only one question pertaining to the Importance of Family Reputation: "How important is it for you to have/keep a good family name?". The means and standard deviations of the Reputation score in each Rearing Typology in the Winnipeg sample is listed below in Table 41.

TABLE 41

Means and Standard Deviations of the Importance of Reputation in the Four Rearing Typologies in the Winnipeg Sample

Rearing Typology	Mean	St. Deviation
Dictatorial (n = 103/26%)	3.54	1.36
Inductive (n = 123/31%)	4.05	1.10
Indulgent (n = 94/23%)	4.20	1.31
Indifferent (n = 80/20%)	3.81	1.14

Note: N = 400. Minimum Score: 1, Neutral Score: 3, Maximum Score: 5.

An analysis of variance was conducted with Rearing as the independent variable and Reputation as the dependent variable. Rearing was found to have significant effects on Reputation, i.e., F (3, 396) = 5.92, p < .0006. Scheffe's

post-hoc test on the Rearing typology groups showed one comparison to be significant at $p < .01$, i.e., Indulgent > Dictatorial, $t = .66$.

6.3.2.10. Summary of the Relationship between Rearing Typology and Other Variables

The following may be concluded based on the above results:

(1) Rearing Typology affects GPA and Grade Levels significantly. More specifically, students whose parents are indulgent tend to have higher GPA's.

(2) Rearing Typology affects Internal Attribution significantly in the Winnipeg sample only. That is, students whose parents are Indulgent and Inductive tend to have Internal Attribution.

(3) In both the San Francisco and Winnipeg samples, there was some association between the general Rearing Typology and Dornbusch's Academic Socialization Styles. Thus, Dictatorial (followed by Inductive) parents tended to use the Authoritarian Style most. Inductive and Indulgent parents tended to use the Authoritative Style most. There was no clear pattern as to what Rearing Typology was associated with the Permissive Style.

(4) Rearing typology significantly affects Parental Involvement in both the San Francisco and Winnipeg samples. In the Winnipeg sample, however, it also affects Student Involvement. In the San Francisco and Winnipeg samples, parents who are Dictatorial, Inductive or Indulgent tend to be involved

with their children's school work. Only Indifferent parents are not involved with their children's school work. Also, in the Winnipeg sample students whose parents are Indulgent tend to be more involved with their children's school work.

(5) Rearing typology significantly affects Importance of Family Reputation in both the San Francisco and Winnipeg samples. That is, students whose parents are Inductive tend to rate the Importance of Family Reputation most highly.

6.3.3. Attribution and Its Relationship with Other Variables

The three factors of Attribution that resulted from the factor analysis of the ten sources of Attribution were examined in relation to other variables. In general, Attribution to Failure did not show any significant relationships with other variables. Thus, this section will discuss Success Attribution in most cases. Unless otherwise specified, "attribution" will refer to the Success condition.

In addition, it is also important to note that the students were not given forced choices among the sources of attribution. In other words, they were asked to rate the importance of each attribution rather than ranking the ten sources of attribution. Thus, the total of percentages in the following tables where Attribution is involved does not tally to 100%. The same thing applies for the three factors of Attribution, that is, the total percentage may be more than 100% in most cases.

6.3.3.1. Attribution and GPA in the San Francisco Sample

The correlation between GPA in the "Overall" condition of the students (i.e, regardless of success or failure) and the three factors of Attribution was computed. It was found that GPA and Internal Causes have a significant positive correlation, i.e., $r = .25$, $p < .0001$. The correlation between GPA and Task Difficulty and Chance are not significant, i.e., $r = -.05$ to $+.09$ with p-values from .28 to .02.

In the Success condition only, a significant correlation was obtained between Internal Causes and GPA, i.e., $r = +.26$, $p < .0001$. There was no significant correlation between GPA and Task Difficulty and Chance, i.e., r ranged from $-.04$ to $+.13$, with p values from .46 to .004. In the Failure condition only, no significant correlations were found between GPA and the three Factors of Attribution, i.e., r ranged from $-.04$ to .21, with p-values from .46 to .004.

6.3.3.2. Attribution and Academic Socialization Styles in the San Francisco Sample

Correlations were calculated for further analysis. Significant positive correlations were found: (1) Task and Authoritarian Style, i.e., $r = .21$, $p < .0001$; (2) Task and Authoritative Style, i.e., $r = .17$, $p < .0001$; (3) Chance and Authoritarian Style, i.e., $r = .15$, $p < .001$; and, (4) Internal Causes and Authoritative Style, i.e., $r = .26$, $p < .0001$.

Moreover, a significant negative correlation was found between Internal Causes and Permissive Style, i.e., $r = -.22$, $p < .0001$.

6.3.3.3. Attribution and Academic Socialization Styles in the Winnipeg Sample

Correlations were calculated for further analysis. Two significant positive correlations were obtained: (1) Internal Causes and Authoritative style, i.e., $r = .26$, $p < .0001$, and (2) Chance and Authoritarian style, i.e., $r = .20$, $p < .0001$.

6.3.3.4. Attribution and Involvement in School Work in the San Francisco Sample

Students' Involvement with their school work was correlated with the three Factors of Attribution. The results suggest that there is a positive correlation between (1) Student Involvement and Attribution to Internal Causes, i.e., $r = .44$, $p < .0001$, and (2) Student Involvement and Attribution to Task, i.e., $r = .17$, $p < .0001$.

Further, there was no significant correlation between Student Involvement and Chance, i.e., $r = .02$, $p < .67$. Concerning Parental Involvement and Attribution, significant positive correlations were found between Parental Involvement and all three Factors of Attribution. These correlations are:

(1) Parental Involvement and Internal Causes, $r = .26$, $p < .0001$;

(2) Parental Involvement and Task Difficulty, $r = .21$, $p < .0001$; and,

(3) Parental Involvement and Chance, $r = .17$, $p < .0001$.

In addition, the correlation coefficient between Parental and Student Involvement is $r = .20$, $p < .0001$.

6.3.3.5. Attribution and Involvement in School Work in the Winnipeg Sample

Positive significant correlations were found between the following:

(1) Student Involvement and Internal Attribution, $r = .48$, $p < .0001$;

(2) Student Involvement and Task Difficulty, $r = .19$, $p < .0001$;

(3) Parental Involvement and Internal Attribution, $r = .26$, $p < .0001$,

(4) Parental Involvement and Task Difficulty, $r = .14$, $p < .005$; and,

(5) Parental Involvement and Chance, $r = .18$, $p < .0003$.

The only insignificant correlation was found between Student Involvement and Chance, $r = .05$, $p < .33$. In addition, there is a significant positive correlation between Student and Parental Involvement, $r = .29$, $p < .0001$.

6.3.3.6. Attribution and Importance of Family Reputation in the San Francisco Sample

An overall Reputation score was obtained consisting of both Family and School Reputation scores. A correlational analysis was performed between the three Factors of Attribution and the overall Importance of Reputation. It was found that the three Factors of Attribution had significant positive correlation with the Importance of Family Reputation, i.e., $r = .34$ for Internal Causes, $p < .0001$; $r = .25$ for Task, $p < .0001$, and $r = .12$ for Chance, $p < .0001$.

6.3.3.7. Attribution and Importance of Family Reputation in the Winnipeg Sample

A significant positive correlation was found between Reputation and the three Factors of Attribution. The correlation coefficients are as follows:

(1) Reputation and Internal Causes, $r = .30$, $p < .0001$;

(2) Reputation and Task Difficulty, $r = .14$, $p < .01$; and,

(3) Reputation and Chance, $r = .17$, $p < .001$.

6.3.3.8. Summary of the Relationship between Attribution and other Variables

The following relationships may be summarized from the results presented above:

(1) Internal Causes is positively associated with GPA in the Success condition. That is, students who attribute their

Success to Internal Causes tend to have high grades.

(2) Internal Causes has also a positive correlation with Authoritative Style, Student Involvement, Parental Involvement, and Importance of Reputation. These correlations were obtained in both the San Francisco and Winnipeg samples. Thus, students who have Internal Attribution tend to have parents who are Authoritative and are Involved with their school work. Likewise, students who have Internal Attribution also tend to be more Involved with their school work and place a high Importance on Family Reputation.

(3) Students who attribute their School Success or Failure to Task Difficulty tend to have high Involvement with their school work as well as parents who are highly Involved in their studies. This finding was demonstrated both in the San Francisco and Winnipeg samples.

(4) It was further revealed that Winnipeg and San Francisco students who attribute School Success or Failure to Chance tend to have Authoritarian parents. However, San Francisco students who indicated attribution to Task Difficulty tended to also have Authoritarian parents.

(5) Another finding from the San Francisco sample only is that there is a negative relationship between Internal Attribution and Permissive Style. In other words, those students who have Internal Attribution do not tend to have Permissive parents.

6.4. Stepwise Regression Procedure and Path Analysis on the Important Predictors of Academic Achievement

According to the objectives of this study, the dependent variable in the stepwise regression and path-analytic procedures is chosen to be Student Involvement for the Winnipeg sample and GPA for the San Francisco sample. The independent variables that have significant correlation coefficients with these dependent variables were entered in a model that was tested through stepwise-regression procedures.

Stepwise-regression procedures resulted in a regression model that identifies the most-significant predictors for the specified dependent variables. Path analysis was then conducted to determine the direction and strength of the relationship between the identified independent variables and their corresponding dependent variables selected from the predictors in the stepwise-regression model. This section will discuss the results of stepwise-regression procedure and path analysis.

6.4.1. Stepwise Regression Procedure

A stepwise-regression procedure is a statistical method in regression that selects the most significant predictors of the specified dependent variable. The procedure used in the present study is the stepwise method with the PROC STEPWISE command as specified in the Statistical Analysis System (SAS) Manual (SAS Users' Guide: Statistics, 1985). PROC STEPWISE is most helpful in exploratory analysis,because it gives one insight into the

relationships between the independent and the dependent variables. PROC STEPWISE selects the regressors for a model through five strategies: Forward, Backward, Stepwise, MAXR (Maximum R-squared) and MINR (Minimum R-squared).

The stepwise method, used in this study, is a modification of the forward selection technique. In addition, it differs from the forward selection technique in that the variables already in the model do not necessarily stay there. Nevertheless, just like the forward-selection model, the variables are added one by one to the model, and the F-statistic for a variable to be added must be significant at the SLENTRY = level (i.e., $p < .50$ for SAS default value). However, the stepwise method additionally deletes any variable that does not produce an F-statistic significant at the SLSTAY = level (i.e., $p < .15$ for SAS default value). Another variable can be added to the model only after this check is made and the necessary deletions done.

The stepwise process "ends when none of the variables outside the model has an F-statistic significant at the SLENTRY = level and every variable in the model is significant at the SLSTAY = level or when the variable to be added to the model is one just deleted from it" (SAS User's Guide: Statistics, 1985, p. 764). As earlier mentioned, the default values of SLENTRY is set at .50 and of SLSTAY at .15 in the SAS stepwise regression procedure.

According to Younger (1985), there are five criteria for the appropriateness of the regression model. These include the

following: (1) C(p) statistic; (2) R-squared or coefficient of determination; (3) standard error of estimate; (4) Beta weight; and, (5) attained significance level or p- value of the test.

The C(p) statistic is an index of the goodness-of-fit of the model in that it measures the "goodness" of a model in terms of whether or not the error mean square contains only random variation. The regression model is considered good if the C(p) statistic is less than p, where p = the number of specified independent variables + 1.

The R-squared or coefficient of determination refers to the amount of variation in the dependent variable that the independent variables account for. The standard error of estimate is the average amount by which the actual values differed from the estimated values and a small estimate is better because it means that the actual values do not differ much from the estimated values. The Beta weight represents the slope of the regression line. Its absolute value can be used to compare the relative effects of the independent variables on the variation of the dependent variables in the regression model.

The attained significance level represents the risk of having made an error of rejecting the null hypothesis. For example, if this level is set at .001, then the probability to have this risk is less than or equal to .001.

In addition, the raw scores of the variables in the dataset of the present study were transformed into z-scores (i.e.,

standardized) before entering the regression. The raw scores were standardized in order to have the same kind of score range and thus, make comparisons between scores more meaningful and easier to interpret (SAS User's Guide, 1985, p. 743).

To summarize, a stepwise-regression procedure was conducted for each specified dependent variable in the two separate samples of San Francisco and Winnipeg. The independent variables were chosen on the basis of their significant correlations with the specified dependent variables. The resulting model for each dependent variable was identified by the SAS stepwise procedure with p level set at .15 and following the five criteria set by Younger (1985) as enumerated above. These models entered into regression for stepwise procedure and the resulting "best" regression models will be presented below.

6.4.1.1. Stepwise-Regression Procedure on the Predictors of GPA in the San Francisco Sample

The regression model that was tested consisted of the following independent variables for GPA: GPA = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); Student-related variables (Student Involvement, Internal Attribution, Importance of Family Reputation); and Parent-related variables (Parents' Education, Parental Involvement in school

work). The "best" according to the criteria discussed earlier showed GPA to be regressing on 8 predictors: Paternal Acceptance, Paternal Psychological Control, Maternal Firm Control, Parents' Education, Authoritative Style, Authoritarian Style, Student Involvement and Internal Attribution. Table 42 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 42

Stepwise Regression Results for the Dependent Variable GPA in the San Francisco Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Student Involvement	+0.28	0.04	40.22***
Maternal Firm Control	+0.22	0.04	27.96***
Authoritarian Style	-0.21	0.05	20.17***
Internal Attribution	+0.10	0.04	5.51+
Paternal Psychological Control	-0.08	0.04	3.86+
Parents' Education	+0.07	0.04	2.86+
Authoritative Style	+0.08	0.05	2.56+
Paternal Acceptance	+0.07	0.04	2.41+

Note: N = 535, C(p) = 8.16, degrees of freedom = 8, 527, R Squared = 0.22, *** = significant at p <.0001, + = significant at p < .15.

6.4.1.2. Stepwise-Regression Procedure on the Predictors of Student Involvement in the San Francisco Sample

The following independent variables for Student Involvement were entered for stepwise-regression procedure: Student Involvement = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological

Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); Student-related variables (Internal Attribution and Importance of Family Reputation); and Parent-related variables (Parents' Education and Parental Involvement in school work). The resulting "best" regression model in the San Francisco sample indicated Student Involvement to be regressing on 5 predictors: Internal Attribution, Parents' Education, Authoritative Style, Permissive Style, and Paternal Psychological Control. Table 43 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 43

Stepwise-Regression Results for the Dependent Variable Student Involvement in the San Francisco Sample

	Regression Results		
Independent Variables	Beta Value	St. Error	F-Value
Internal Attribution	+0.36	0.04	80.70***
Parents' Education	+0.16	0.04	17.20***
Authoritative Style	+0.12	0.04	9.61*
Permissive Style	-0.11	0.04	7.41*
Paternal Psychological Control	-0.10	0.04	7.35*

Note: N = 535, C(p) = 2.68, degrees of freedom = 5, 530, R- Squared = 0.26, *** = significant at p <.0001, * = significant at p < .01.

6.4.1.3. Stepwise-Regression Procedure on the Predictors of Student Involvement in the Winnipeg Sample

The model entered into stepwise-regression procedure comprised of the following independent variables for Student Involvement: Student Involvement = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); Student-related variables (Internal Attribution and Importance of Family Reputation); and Parent-related variables (Parents' Education and Parents'Involvement in school work).

Six predictors were selected in the "best" regression model for Student Involvement: Internal Attribution, Parental Involvement, Paternal Psychological Control, Maternal Firm Control, Maternal Acceptance and Importance of Family Reputation. Table 44 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 44

Stepwise-Regression Results for the Dependent Variable Student Involvement in the Winnipeg Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Internal Attribution	+0.38	0.05	70.27***
Parental Involvement	+0.17	0.05	12.45**
Paternal Psychological Control	-0.14	0.04	10.76**
Maternal Firm Control	+0.12	0.04	6.94+
Maternal Acceptance	+0.10	0.04	4.32+
Importance of Family Reputation	+0.09	0.04	3.91+

Note: N = 400, C(p) = 8.83, degrees of freedom = 6, 394, R Squared= 0.31, *** = significant at p <.0001, ** = significant at p < .001, + = significant at p < .15.

6.4.1.4. Stepwise-Regression Procedure on the Predictors of Internal Attribution in the San Francisco Sample

The following model with Internal Attribution as the dependent variable was tested: Internal Attribution = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styless (Authoritarian, Authoritative, Permissive); Student-related variables (Importance of Family Reputation); and

Parent-related variables (Parents' Education and Parents'Involvement in school work). The "best" regression model in the San Francisco sample showed Internal Attribution to be regressing on 7 predictors: Importance of Family Reputation, Paternal Firm Control, Paternal Acceptance, Parents' Education, Permissive Style, Authoritative Style, and Paternal Psychological Control. Table 45 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 45

Stepwise-Regression Results for the Dependent Variable Internal Attribution in the San Francisco Sample

	Regression Results		
Independent Variables	Beta Value	St. Error	F-Value
Importance of Family Reputation	+0.24	0.05	28.44***
Paternal Firm Control	+0.15	0.05	10.77**
Paternal Acceptance	+0.13	0.05	7.43*
Parents' Education	+0.09	0.04	5.26+
Permissive Style	-0.10	0.04	5.04+
Authoritative Style	+0.09	0.05	3.87+

Note: N = 535, C(p) = 6.65, degrees of freedom = 7, 528, R-Squared = 0.18, *** = significant at p <.0001, ** = significant at p < .001, + = significant at p < .15.

6.4.1.5 Stepwise-Regression Procedure on the Predictors of Internal Attribution in the Winnipeg Sample

The following independent variables for Internal Attribution were included in the tested model: Internal Attribution = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styless (Authoritarian, Authoritative, Permissive); Student-related variables (Importance of Family Reputation); and Parent-related variables (Parents' Education and Parental Involvement in school work).

The "best" regression model in the Winnipeg sample showed Internal Attribution to be regressing on 5 predictors: Importance of Family Reputation, Parental Involvement, Maternal Acceptance, Paternal Acceptance, and Maternal Firm Control. Table 46 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 46

Stepwise-Regression Results for the Dependent Variable Internal Attribution in the Winnipeg Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Importance of Family Reputation	+0.22	0.05	22.15***
Parental Involvement	+0.13	0.05	7.15*
Maternal Acceptance	+0.12	0.06	4.26+
Paternal Acceptance	+0.11	0.06	3.66+
Maternal Firm Control	+0.09	0.05	3.52+

Note: N = 400, $C(p)$ = 1.07, degrees of freedom = 5, 394, R-Squared = 0.17, *** = significant at p <.0001, * = significant at p < .01, + = significant at p < .15.

6.4.1.6. Stepwise-Regression Procedure on the Predictors of the Importance of Family Reputation in the San Francisco Sample

The independent variables for the Importance of Family Reputation were specified as follow: Importance of Family Reputation = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); and Parent-related variables (Parents' Education and Parental Involvement in school work).

The "best" model obtained from the stepwise-regression

procedure for Internal Attribution is: Internal Attribution = Parental Involvement, Maternal Firm Control, Maternal Acceptance, Paternal Psychological Control, Parents' Education, Permissive Style, and Authoritative Style. Table 47 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 47

Stepwise-Regression Results for the Dependent Variable Importance of Family Reputation in the San Francisco Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Parental Involvement	+0.31	0.06	25.67***
Maternal Firm Control	+0.11	0.04	7.78*
Maternal Acceptance	+0.10	0.04	4.97+
Paternal Psychological Control	+0.09	0.04	4.95+
Parents' Education	+0.08	0.04	4.36+
Permissive Style	-0.10	0.05	4.32+
Authoritative Style	+0.10	0.05	3.13+

Note: N = 535, C(p) = 8.91, degrees of freedom = 7, 528, R-Squared = 0.28, *** = significant at p <.0001, * = significant at p < .01, + = significant at p < .15.

6.4.1.7. Stepwise-Regression Procedure on the Predictors of Importance of Family Reputation in the Winnipeg Sample

The tested regression model consisted of the following independent variables for Importance of Family Reputation: Importance of Family Reputation = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); and Parent-related variables (Parents' Education and Parental Involvement in school work).

The "best" model identified by the SAS stepwise procedure in the Winnipeg sample showed Importance of Family Reputation to be regressing on 4 predictors: Permissive Style, Authoritarian Style, Paternal Acceptance, and Maternal Psychological Control. Table 48 below provides information on the R-squared, $C(p)$ statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 48

Stepwise-Regression Results for the Dependent Variable Importance of Family Reputation in the Winnipeg Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Permissive Style	-0.34	0.05	38.70***
Authoritarian Style	+0.25	0.05	34.60***
Paternal Acceptance	+0.19	0.05	16.46***
Maternal Psychological Control	-0.12	0.05	5.95*

Note: N = 535, C(p) = 1.05, degrees of freedom = 4, 396, R-Squared = 0.13, *** = significant at p <.0001, * = significant at p < .01,

6.4.1.8. Stepwise-Regression Procedure on the Predictors of Parental Involvement in the San Francisco Sample

The independent variables entered into the tested regression model were: Parental Involvement = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); and Parent-related variables (Parents' Education).

The identified "best" regression model in the San Francisco sample showed Parental Involvement to be regressing on 3 predictors: Permissive Style, Authoritarian Style, and

Authoritative Style. Table 49 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 49

Stepwise-Regression Results for the Dependent Variable Parental Involvement in the San Francisco Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Permissive Style	-0.44	0.02	380.50***
Authoritarian Style	+0.44	0.02	340.46***
Authoritative Style	+0.38	0.02	239.85***

Note: N = 535, C(p) = -1.36, degrees of freedom = 3, 532, R-squaredd = .75, *** = significant at p <.0001.

6.4.1.9. Stepwise-Regression Procedure on the Predictors of Parental Involvement in the Winnipeg Sample

The tested regression model consisted of the following independent variables for Parental Involvement: Parental Involvement = 6 CRPBI Dimensions (Maternal Acceptance, Maternal Firm Control, Maternal Psychological Control, Paternal Acceptance, Paternal Firm Control, Paternal Psychological Control); 3 Academic Socialization Styles (Authoritarian, Authoritative, Permissive); and Parent-related variables (Parents' Education).

The "best" regression model in the Winnipeg sample showed Parental Involvement to be regressing on 6 predictors: Permissive Style, Authoritarian Style, Authoritative Style, Paternal Psychological Control, Paternal Firm Control, and Paternal Acceptance. Table 50 below provides information on the R-squared, C(p) statistic, Beta weights, F-values and p-levels of these independent variables.

TABLE 50

Stepwise-Regression Results for the Dependent Variable Parental Involvement in the Winnipeg Sample

Independent Variables	Regression Results		
	Beta Value	St. Error	F-Value
Permissive Style	-0.80	0.04	330.22***
Authoritarian Style	+0.38	0.05	52.13***
Authoritative Style	+0.24	0.05	23.25***
Paternal Psychological Control	+0.14	0.05	9.00*
Paternal Firm Control	+0.11	0.04	6.88*

Note: N = 400, C(p) = 6.38, degrees of freedom = 7, 393, R-Squared = 0.53, *** = significant at p <.0001, * = significant at p <.01.

6.4.2. Path Analysis of the Significant Predictors of GPA in the San Franciso Sample and of Student Involvement in the Winnipeg Sample

As mentioned earlier, the significant predictors of the specified dependent variables in both the San Francisco and Winnipeg samples were identified through the stepwise-regression procedure discussed above. However, there are two kinds of information that regression analysis does not provide: the ordering of the relationships between the dependent and independent variables and the causal direction of these relationships. Path analysis is a statistical procedure that attempts to answer these two questions (Cohen & Cohen, 1985; Pedhazur, 1983). It can be used to test a hypothetical ordering of the relationships all the variables involved through various kinds of effects such as direct, indirect and total effects. Further, statistical inference on the causal direction of the relationship for any pair of variables can be performed with this technique.

Thus, path analysis was conducted in the present study to determine the linkages of the predictor variables with GPA in the San Franciso sample and with Student Involvement in the Winnipeg sample. Although path analysis does not necessarily imply a definite cause-and-effect relationship between the variables, it demonstrates how the variables may be linked to each other in a complex set of hypothesized relationships (Pedhazur, 1983). It is expected that in the present study path analysis will present

a clearer and more complete picture of what variables are responsible for the variation in GPA in the San Francisco sample and in Student Involvement in the Winnipeg sample, and how these variables in return are affected by the other independent variables in the model.

6.4.2.1. Results of Path Analysis of GPA in the San Francisco Sample and of Student Involvement in the Winnipeg Sample

The path analysis employed in this study consisted of procedures developed by Huynh (1992) through SASPA, a SAS computer program for path analysis. There were three preliminary steps initially done before SASPA was used to perform four main phases in the path analysis. The preliminary steps were: (1) variable identification; (2) path diagram; and, (3) table of structural (or reduced-form) equations. After these three steps were completed, the following phases were conducted: (1) regression analysis; (2) decomposition of total effects; (3) decomposition of indirect effects involving the ultimate outcome(s); and, (4) decomposition of total net effects or hierarchical path analysis of the ultimate outcome(s).

The researcher determines the variables to be studied in variable identification. These variables can be categorized into Exogeneous variables (causes), Explanatory variables (or the intermediate causes/effects) and the Ultimate outcomes (i.e., the effects, or the dependent variables of interest). In the present study, these variables were identified separately for the San

Francisco and Winnipeg samples.

In the San Francisco sample, the ultimate outcome was GPA and the explanatory variables were Student Involvement, Internal Attribution, Importance of Reputation, and Parental Involvement. Both the ultimate outcome and explanatory variables were termed under Endogeneous variables. The Exogeneous variables consisted of Authoritative Style, Authoritarian Style, Permissive Style, Maternal Acceptance, Maternal Firm Control, and Parents' Education.

In the Winnipeg sample, the Endogeneous variables comprised the ultimate outcome of Student Involvement and the explanatory variables of Internal Attribution, Importance of Family Reputation and Parental Involvement. The Exogeneous variables were the same under the San Francisco sample, namely: Authoritative Style, Authoritarian Style, Permissive Style, Maternal Acceptance, Maternal Firm Control, and Parents' Education.

In both the San Francisco and Winnipeg samples, the Exogeneous variables were determined by selecting among the predictors in the "best" stepwise-regression models only those significant at p-values of .001 or less. After identifying these variables, a path diagram and table of structural equations were developed.

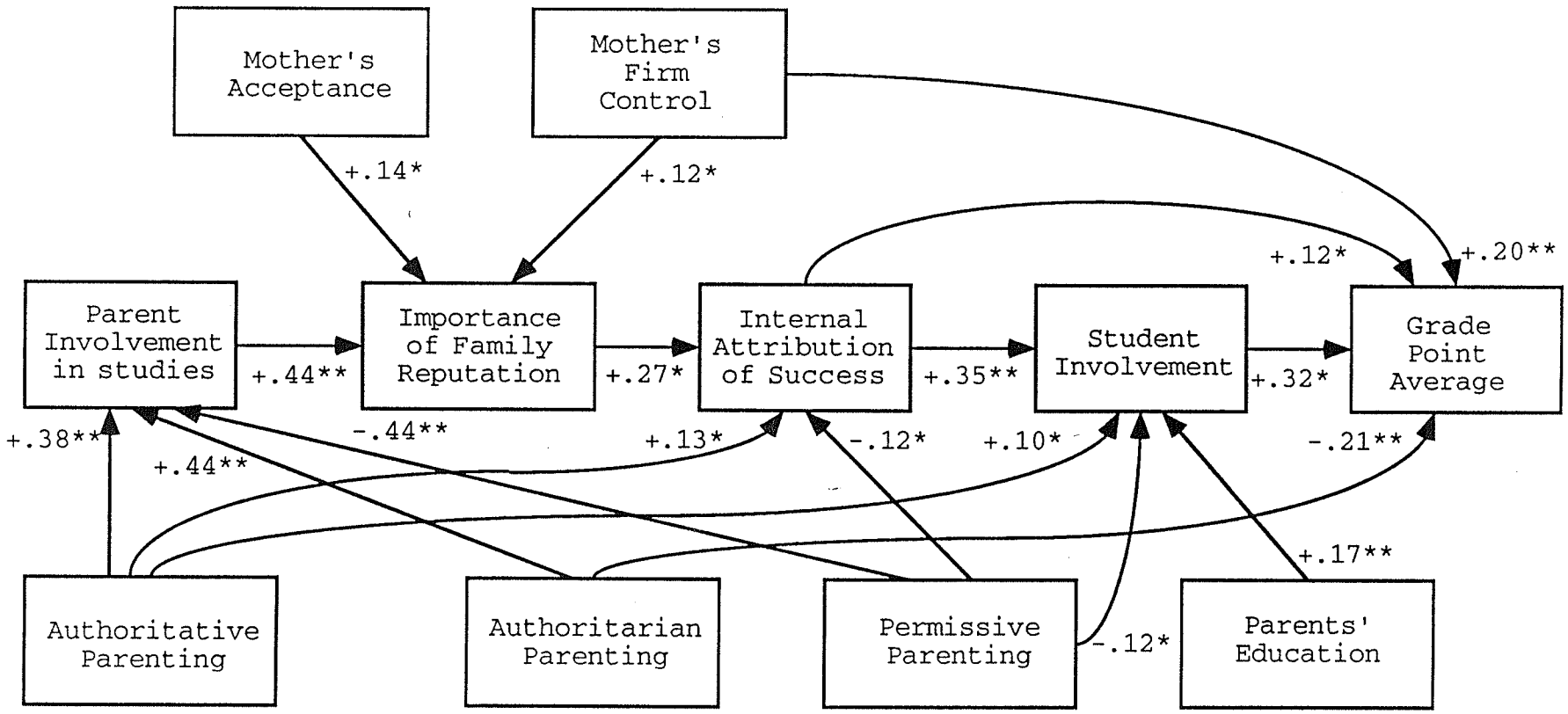
The SASPA program was then ran to conduct the path analysis. The results of the path analysis included regression analysis and decomposition of the various effects of these variables. The

regression analysis consisted of simple regression and multiple regression. The decomposition of effects and its details will be discussed in another section after presenting the results of path analysis below.

The path-analytic models resulting from SASPA are shown below in both the San Francisco and Winnipeg samples. In Figure 2, the path-analytic model of the predictors of Grade Point Average in the San Francisco sample is represented together with the relevant path coefficients. In Figure 3, the path-analytic model of the predictors of Student Involvement in the Winnipeg sample and their path coefficients are depicted.

FIGURE 2

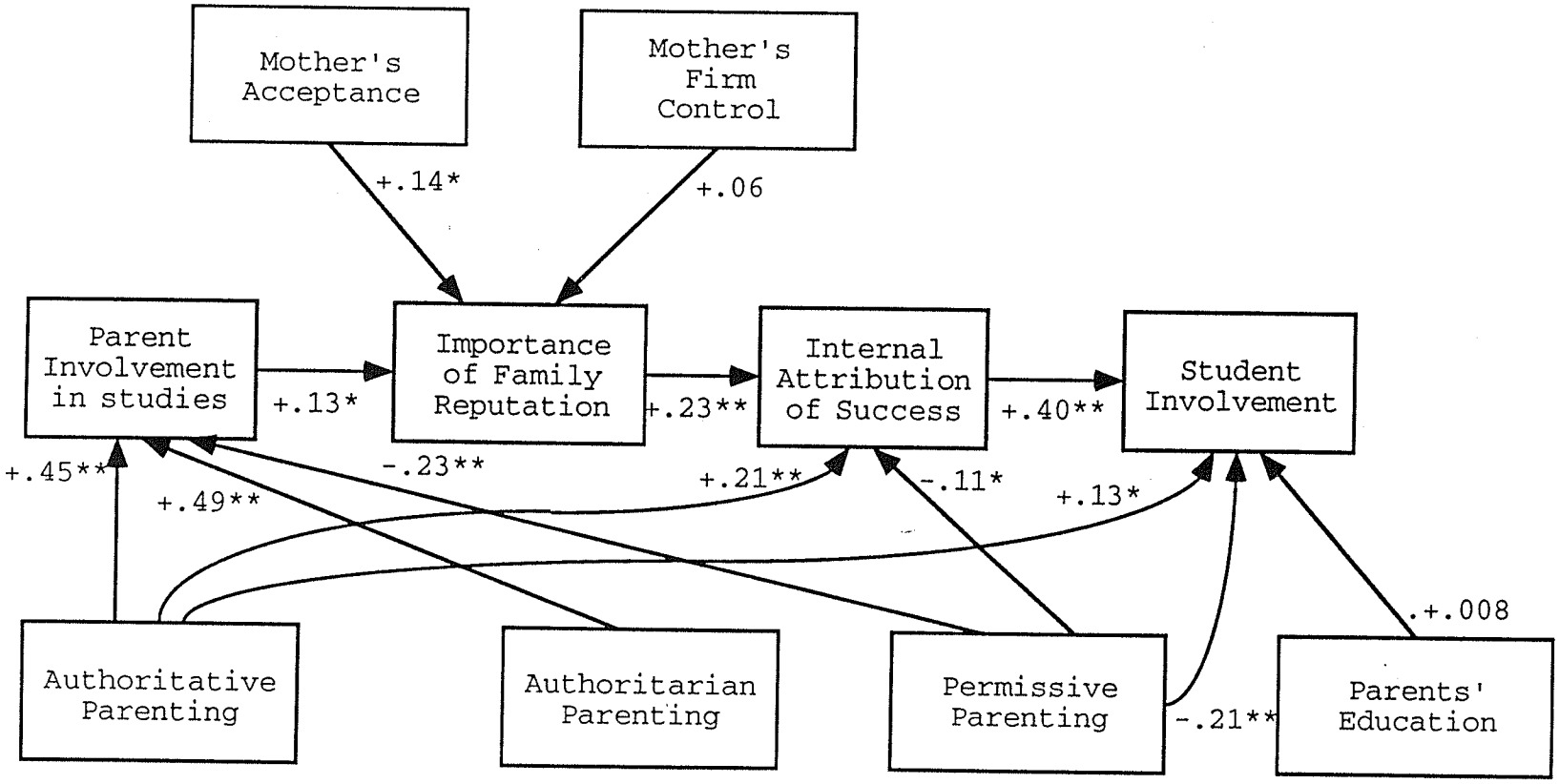
The Path-Analytic Model of the Predictors of Grade Point Average in the San Francisco Sample and the Path Coefficients of these Predictors



** = significant at $p < .001$
* = significant at $p < .01$

FIGURE 3

The Path-Analytic Model of the Predictors of Student Involvement in the Winnipeg Sample and the Path Coefficients of these Predictors



** = significant at $p < .001$
* = significant at $p < .01$

6.4.2.2. Decomposition of the Effects on GPA

As pointed out earlier, Huynh (1992) employed SASPA to perform three other main phases in path analysis aside from the regression analysis mentioned above. These three other phases were: decomposition of Total Effects, decomposition of Indirect Effects involving the ultimate outcome(s), and decomposition of Total Net Effects or Hierarchical path analysis of the ultimate outcome(s).

Simple regression deals with determining the regression coefficient between an independent variable (or potential cause) and the dependent variable (or an effect). This is referred to as the Total Effect (TE) of a potential cause on an effect. Multiple regression, on the other hand, results in partial regression coefficients representing the components of the Total Effect for any pair of variables in the model. The partial regression coefficient is called the Direct Effect (DE) between the relevant variable pairs (Huynh, 1992).

According to Cohen & Cohen (1985), the Direct Effect (DE) of each Exogeneous variable (X) on an Endogeneous variable (Y) is estimated by the regression of Y on X when all other hypothesized causes of Y are included in the equation. Thus, Direct Effects are computed by the partial regression coefficients as explained above. Indirect Effects (IE), on the other hand, can be computed by the products of Direct Effects. In Huynh's (1992) definition, an Indirect Effect is the sum of all products of Direct Effects that form one-way links from X to Y via the third variables.

Further, a Spurious Effect (SE) results from those effects due to common causes and it represents the random error of the causal model. In addition, any other residual amount of the Total Effect is identified as Unexplained Effect (UE) (Huynh, 1992).

The values of the Direct Effect, Indirect Effect, Total Effect, Spurious Effect and Unexplained Effect for each of the independent variables were computed in the present study. In addition, the significance of each Direct Effect and Indirect Effect was estimated through a z-statistic. All Unexplained Effects (UE) in the present study were equal to zero, thus, they were not reported.

Four variables are found to have Direct Effects on GPA. These variables and their corresponding path coefficients or Direct Effects are as follows: (1) Student Involvement, DE = +.32, $p < .001$; (2) Maternal Firm Control, DE = +.20, $p < .001$; (3) Internal Attribution, DE = +.13, $p < .01$; and (4) Authoritarian Style, DE= -.21, $p < .001$. Internal Attribution also has a Spurious Effect on GPA, although insignificant, i.e., SE = .0017. These results may be interpreted to mean that high GPA is associated with the following variables:

(1) High Student Involvement;

(2) High Maternal Firm control;

(3) High Internal Attribution; and,

(4) Low Authoritarian Academic Socialization.

Table 51 lists the effects of the independent variables of

GPA. These independent variables consist of both the Exogeneous and Explanatory variables on GPA.

TABLE 51

Summary of the Effects on GPA

Independent Variable	Direct Effect	z-Value of the DE	Total Effect
Student Involvement	+.32	+7.46**	+.32
Authoritarian Style	-.21	-5.17**	-.21
Maternal Firm Control	+.20	+4.84**	+.20
Internal Attribution	+.13	+2.89*	+.13

Note: ** = significant at $p < .001$, * = at $p < .01$, Also, there are no Indirect and Spurious Effects on GPA.

6.4.2.3. Decomposition of the Effects on Student Involvement

Three variables were found to have Direct Effects on Student Involvement both in the Winnipeg and San Francisco samples. These variables and their corresponding Direct Effects or path coefficients are as follows:

(1) Internal Attribution, DE = +.35, $p < .001$ (in the San Francisco sample); DE = +.40, $p < .001$ (in the Winnipeg sample);

(2) Authoritative Style, DE = +.10 $p < .01$ (in the San Francisco sample); DE = +.13, $p < .01$ (in the Winnipeg sample).

(3) Permissive Style, DE = -.12, $p < .01$ (in the San

Francisco sample); DE = −.21, $p < .001$ (in the Winnipeg sample).

Only in the San Francisco sample was Parental Education also shown to have a significant Direct Effect on Student Involvement, i.e., DE = +.17 $p < .001$. In addition, in both the San Francisco and Winnipeg samples, the Permissive Style was found to have a significant Indirect Effect on Student Involvement, i.e., IE = .06, $p < .01$ (in the San Francisco sample), IE = −.04, $p < .01$ (in the Winnipeg sample). Furthermore, Internal Attribution had a Spurious Effect of .03 on Student Involvement in the San Francisco sample, although insignificant.

The interpretation of these results are as follows:

(1) High Student Involvement in the two samples is associated with High Internal Attribution, High Authoritative Style and Low Permissive Style.

(2) High Student Involvement in both samples is both directly and indirectly influenced by Low Permissive Style. The Permissive Style has an indirect relationship through Internal Attribution.

Table 52 summarizes the effects on Student Involvement.

TABLE 52

Summary of the Effects on Student Involvement

	Direct Effect	z-Value of DE	Indirect Effect	z-Value of IE	Total Effect
	Independent Variable = Internal Attribution				
SF Sample	+.35	8.89**	0	0	+.38
WPG Sample	+.40	9.01**	0	0	+.40
	Independent Variable = Permissive Style				
SF Sample	-.12	2.94*	-.06	-3.62*	-.18
WPG Sample	-.21	4.78**	-.05	-2.21*	-.26
	Independent Variable = Authoritative Style				
SF Sample	+.10	2.59*	-.02	+3.42	+.12
WPG Sample	+.13	2.99*	+.09	+21.81***	+.22
	Independent Variable = Parental Education				
SF Sample	+.17	4.42**	0	0	+.17
WPG Sample	+.01	.15	0	0	+.01

Note: *** = significant at $p < .0001$, ** = at $p < .001$, * = at $p < .01$; Also, there are no Spurious Effects on Student Involvement except for Internal Attribution which is equal to .03 and insignificant.

6.4.2.4. Decomposition of the Effects on Internal Attribution

Three variables were demonstrated to have significant Direct effects on Internal Attribution in both the San Francisco and Winnipeg samples. These variables and their corresponding path coefficients in each sample are the following: (1) Importance of Family Reputation: DE = +.27, $p < .01$ (in the San Francisco sample) & DE = +.23, $p < .001$ (in the Winnipeg sample); (2) Authoritative Style: DE = +.13, $p < .01$ (in the San

Francisco sample) & DE = +.21, $p < .001$ (in the Winnipeg sample); and, (3) Permissive Style: DE = -.12, $p < .01$ (in the San Francisco sample) & DE = -.11, $p < .01$ (in the Winnipeg sample).

Additionally, the Authoritative Style has a significant Indirect Effect on Internal Attribution in the Winnipeg sample (IE = +.01, $p < .01$) while the Permissive Style has a significant Indirect Effect on the San Francisco sample (IE = -.05, $p < .01$). Also, Importance of Family Reputation has a Spurious Effect on Internal Attribution in the San Francisco sample, although not significant (i.e., SE = +.06).

Thus, the following relationships may be inferred with the effects shown in Table 53 below:

(1) High Internal Attribution is associated with high Importance of Family Reputation, High Authoritative Style, and Low Permissive Style in both the San Francisco and Winnipeg samples.

(2) High Authoritative Style has a significant Indirect Effect on High Internal Attribution through Parental Involvement and Importance of Reputation, in the Winnipeg sample only while Low Permissive Style has a significant Indirect Effect on High Internal Attribution in the San Francisco sample only through Parental Involvement and Importance of Family Reputation.

TABLE 53

Summary of the Effects on Internal Attribution

	Direct Effect	z-Value on DE	Indirect Effect	z-Value on IE	Total Effect
Independent Variable = Importance of Family Reputation					
SF Sample	+.27	+5.95	0	0	+.33
WPG Sample	+.23	0	0	0	+.23
Independent Variable = Authoritative Style					
SF Sample	+.13	+2.94	+.04	5.15*	+.17
WPG Sample	+.21	+4.42	+.01	2.91**	+.22
Independent Variable = Permissive Style					
SF Sample	-.12	-2.85	-.05	-5.22*	-.17
WPG Sample	-.11	-2.11	0	0	-.12

Note: *** = significant at $p < .0001$, ** = at $p < .001$, * = at $p < .01$; Also, there are no Spurious Effects on Internal Attribution except for Importance of Family Reputation in the Winnipeg sample which is equal to .06 and insignificant.

6.4.2.5. Decomposition of the Effects on the Importance of Family Reputation

The Importance of Family Reputation was shown to be affected by two variables in the two samples. These are: (1) Parental Involvement: DE= +.44, $p < .01$ (in the San Francisco sample) and DE = +.13, $p < .01$ (in the Winnipeg sample); and, (2) Mother's Acceptance: DE = +.14, $p < .01$ (in the San Francisco Sample) and DE = +.14, $p < .01$ in the Winnipeg sample. In addition, only in the San Francisco sample was Mother's Firm Control found to have a significant Direct Effect on the Importance of Family Reputation, i.e., DE = +.12, $p < .01$. Furthermore, Parental

Involvement had a Spurious Effect of .05 on the Importance of Family Reputation, although this was not significant.

The following results may be inferred from the above effects as summarized in Table 54 below:

(1) High Importance of Family Reputation is associated with High Parental Involvement and High Mother's Acceptance in both samples.

(2) In the San Francisco sample only, High Importance of Family Reputation is associated with High Mother's Firm Control.

TABLE 54

Summary of the Effects on the Importance of Family Reputation

	Direct Effect	z-Value on DE	Total Effect
Independent Variable = Parental Involvement			
SF Sample	.44	10.99*	.49
WPG Sample	.13	2.56*	.13
Independent Variable = Mother's Acceptance			
SF Sample	.14	3.40*	.14
WPG Sample	.14	2.72*	.14
Independent Variable = Mother's Firm Control			
SF Sample	.12	3.05*	.12
WPG Sample	.06	1.2	.06

Note: * = significant at $p < .01$; Also, there are no Indirect and Spurious Effects on the Importance of Reputation, except for the Spurious Effect of Parental Involvement in the San Francisco sample of .05 and is insignificant.

6.4.2.6. Decomposition of the Effects on Parental Involvement

The three Academic Socialization Styles of Authoritative, Authoritarian and Permissive were demonstrated to have significant Direct Effects on Parental Involvement in both samples. The path coefficients of these variables are as follows: (1) Authoritarian Style: DE = +.44, $p < .001$ (in the San Francisco sample) and DE = +.49, $p < .001$ (in the Winnipeg sample); (2) Authoritative Style: DE = +.38, $p < .001$ (in the San Francisco sample) and DE = +.45, $p < .001$ (in the Winnipeg sample); (3) Permissive Style: DE = -.44, $p < .001$ (in the San

Francisco sample) and DE = -.23, $p < .001$ (in the Winnipeg sample). Thus, it can be inferred from the above results that High Parental Involvement is associated with High Authoritarian, High Authoritative, and Low Permissive Style. These effects on Parental Involvement are summarized in Table 55 below.

TABLE 55

Summary of the Effects of Parental Involvement

	Direct Effect	z-Value of DE	Total Effect
	Independent Variable = Authoritarian Style		
SF Sample	+.44	+18.45**	+.44
WPG Sample	+.49	+15.72**	+.49
	Independent Variable = Authoritative Style		
SF Sample	+.38	+15.49**	+.38
WPG Sample	+.45	+14.25**	+.45
	Independent Variable = Permissive Style		
SF Sample	-.44	-19.21**	-.44
WPG Sample	-.23	-7.56**	-.23

Note= ** = significant at $p < .001$; Also, there are no Indirect and Spurious Effects on Parental Involvement.

6.4.2.7. Summary of the Overall Relationships of the Variables Based on Path Analysis

The results of the path analysis may be summarized in terms of the overall relationships between the independent variables and the dependent variables of GPA in the San Francisco sample and of Student Involvement in the Winnipeg sample. Path analysis identified the strength and direction of the independent variables to the specified dependent variables. The path-analytic model in Figures 2 and 3 clearly illustrates how these variables are related to each other. The following statements may be inferred from the results of the path analysis:

(1) GPA is positively associated with Student Involvement, Mother's Firm Control and Internal Attribution, and negatively associated with the Authoritarian Style (see Table 51).

(2) Student Involvement is positively associated with Internal Attribution and Authoritative Style, as well as Parents' Education in the San Francisco sample. It is negatively associated with the Permissive Style (see Table 52).

(3) Internal Attribution is positively associated with Importance of Family Reputation and the Authoritative Style, and negatively associated with the Permissive Style (see Table 53).

(4) Importance of Family Reputation is positively associated with Parental Involvement and Mother's Acceptance as well as Mother's Firm Control in the San Francisco sample only (see Table 54).

(5) Parental Involvement is positively associated with the

Authoritarian and Authoritative Styles and negatively associated with the Permissive Style (see Table 55).

6.6. Summary of the Overall Results based on Factor Analysis, testing the Hypotheses, the Impact of the Demographic, Socialization, and Attribution Variables, Stepwise-Regression Procedure and Path Analysis

The results of this study can be summarized in terms of the significant predictors of the major dependent variable in this research, that of academic achievement measured through GPA. These results integrate the various statistical methods employed in arriving at the conclusions below using the San Francisco sample when GPA was used and Student Involvement when the Winnipeg sample was used. That is, the relationship between the variables in the following summary apply to the Winnipeg sample as far as Student Involvement is concerned; however, when GPA is used as a variable, it refers to the San Francisco sample.

Three demographic variables are found to be associated with high grades in the San Francisco sample: Female Gender, Younger Age, and High Parental Education. These results were consistently shown through analysis of variance and correlation. However, when path analysis was done and Parental Education was included, the variables correlated significantly with GPA, it did not show to be part of the model affecting GPA. Nevertheless, Parental Education was demonstrated to be a significant

antecedent of Student Involvement in the San Francisco sample, but not in the Winnipeg sample.

There were two important procedures that have to be noted in generalizing and interpreting the results of this research. Firstly, CRPBI parenting dimensions were either separated or combined in both the San Francisco and Winnipeg samples.

Secondly, in the San Francisco sample, GPA was generally maintained as a continuous variable, i.e., without categories; however, in some analyses GPA was categorized into three levels of low, average, high and analysis of variance was conducted. The two nondemographic variables of Student Involvement and Internal Attribution tended to be associated with high grades in all statistical procedures used (i.e., correlation, analysis of variance and path analysis). When parenting dimensions were combined and GPA categorized into three levels, it was found that two CRPBI dimensions correlated significantly with GPA. That is, parents' high Acceptance tends to result in high GPA while parents' high Psychological Control tends to result in low GPA.

A consistent finding is that Maternal Firm Control tends to result in high GPA, regardless of the statistical analysis employed. Furthermore, a negative relationship was found between GPA and one Academic Socialization Style: Authoritarian. The Permissive Style correlated significantly with low GPA, but when included in the path analysis model, it did not show any significant relationship with GPA. The Authoritarian Style, however, was demonstrated to be consistently associated with low

GPA, whether in correlation, analysis of variance or path analysis.

Thus, with GPA as a continuous variable and the parenting dimensions separated into mother's and father's, the following variables are shown to be associated significantly with high GPA in the San Francisco sample: the Demographic variables of (1) Female Gender, and (2) Younger Age; and, when path analysis was employed excluding demographic variables, (3) Student Involvement, (4) Internal Attribution, and (5) Maternal Firm Control. In addition, (6) Authoritarian Style tends to be associated with low GPA.

Furthermore, Student Involvement was found to be a pivotal variable through which the other variables were related to GPA in the San Francisco sample. It is also noteworthy that the relationships of the other variables with Student Involvement are similar in both the Winnipeg and San Francisco samples. In other words, it is possible that, if GPA were present in the Winnipeg sample, Student Involvement may also serve as the major link between GPA and the other variables. These similar significant paths in the two samples are found in the following relationships:

(1) High Student Involvement in both the San Francisco and Winnipeg samples is associated with adolescents who have attributed school success to Internal Causes and perceive their mother to be having high Firm Control. In the San Francisco sample only, it is also associated with parents who are highly

educated.

(2) In both the San Francisco and Winnipeg samples, those with high Internal Attribution put a high Importance on Reputation, perceive their parents to be Authoritative, and not Permissive in their Academic Socialization Style.

(3) High Importance of Reputation is found among adolescents whose parents are highly Involved with their adolescents' school work, and who perceive their mother to have a high Firm Control and to be highly Accepting of them.

(4) Adolescents whose parents tend to be hightly Involved with the students' school work have parents who are perceived by the adolescents to be either Authoritarian or Authoritative, but not Permissive, in their Academic Socialization Style.

CHAPTER 7: DISCUSSION

The results of the present study will be discussed and interpreted in this chapter. More specifically, this final chapter integrates the overall findings of this study in view of the major independent variables of academic achievement. There are two major sections in this chapter.

The first section deals with the two significant demographic predictors of GPA: the adolescents' Gender and Age. The second section focuses on the path-analytic model of achievement among Filipino students developed in this study.

This path-analytic model is the central point in this research as it suggests the direct and intermediate linkages among the predictors of GPA. Thus, four subsections will be spent in discussing this path-analytic model. These subsections consist of (1) the variables directly linked to GPA, (2) the intervening variables linked to GPA, (3) a comparison of this path-analytic model with other models of achievement, and (4) an interpretation of this path-analytic model in the cultural context of Filipino Americans.

7.1. Demographic Predictors of GPA

Two demographic variables are found to be associated with high grades: Female Gender and Young Age. That is, females and younger adolescents, i.e., ages 11-15, tend to have higher grades than boys and older adolescents, i.e., ages 16-19.

7.1.1. Female Gender and GPA

Using mostly White samples, studies indicate that gender differences in achievement are inconclusive. That is, no gender differences are observed if some factors are controlled for, such as the age of subjects (Entwistle, Alexander, Dallas & Cardigan, 1987; Fennema & Sherman, 1977, 1978; Sherman & Fennema, 1977; Stein & Smitchells, 1969), the type or area of achievement task (Eccles, Adler & Meece, 1984; Lenney, 1977; Meece & Parsons, 1982) and the beliefs/values on the gender-appropriateness of the task (Stein & Bailey, 1973). When gender differences are found in mathematics, it is usually the males who have higher confidence or expectations of their abilities than the females. For example, males are more confident of their ability to learn mathematics than were females and males had greater stereotyping of mathematics at higher levels than did females (Fennema & Sherman, 1977). Self-confidence defined in terms of both performance expectancies and self-evaluation of abilities and completed performances was found to be lower among women than men (Maccoby & Jacklin, 1974, in Lenney, 1977). Also, gender linkage may be another factor influencing gender differences in

performance expectancies. That is, women had lower expectations than men in the tasks described as masculine, but were not different from men at the tasks described as feminine (Stein, Pohly & Mueller, 1971 and Deaux & Farris, 1974, in Lenney, 1977). This gender difference in attitudes and beliefs in stereotyped masculine tasks may be accounted for by the greater emphasis put by parents, teachers and society in general to value higher achievement for males rather than for females.

In the present study, the courses included in obtaining GPA are not limited to a specific area. It includes the major courses of Mathematics, English, Science and History, as well as minor subjects such as Arts, Music and Physical Education. Thus, the area of achievement is not a question in this study. Consequently, the students' attitudes or beliefs about the gender-appropriateness of the achievement task do not apply in this case. The students were asked their overall achievement in school rather than in specific courses through their self-reported grades. Further, their grades obtained from school records were also an indicator of school achievement in general, rather than specific courses.

Moreover, the findings cited above employed mostly White samples and ethnic research on gender differences hardly exist. A comprehensive review was done by Slaughter-Defoe and colleagues (1990) on ethnic-minority children and academic achievement. The review showed how ethnic research for the past two decades has not provided information on the variations and diversities of the

various Asian American groups. Further, the ethnic research tended to focus on the success, rather than including failure, of Asian Americans. There was also no indication of studies on gender differences in achievement.

It was found in the present study that Filipino girls have higher grades than Filipino boys (See Chapter 6, Section 6.1.9). This confirmed the hypothesis in this research based on the premise that, although Filipino parents encourage both sons and daughters to achieve well in school, girls tend to spend more time in studying.

This may be due either to obedience to their parents or to a greater motivation and/or discipline to achieve. It is not uncommon among immigrants, and particularly Asian Americans, to use education as a means to improve their economic and social status (e.g., Lipset & Bendix, 1967, Blau & Duncan, 1967, in Azores, 1987). It is widely known and accepted that individuals with college education earn more than high school graduates (San Francisco Chronicle, 1993).

Thus, immigrant parents who come to North America to improve their economic situation foster in their children the value of academic achievement. Yao (1985), for instance, found this among the parents of an Asian American sample consisting of Chinese, Koreans, Filipinos, Vietnamese, and East Indians, regardless of the gender of their children. Among Filipinos, parents also emphasize the importance of finishing school, whether they are living in the Philippines or North America (Buduhan & Oandason,

1981; Jocano, 1979). Girls tend to be more obedient to their parents, spend more time studying and do better in school than boys.

7.1.2. Younger Adolescents and GPA

The finding in this research is that younger adolescents, i.e., 11-15 years old, achieve more than older adolescents, i.e., 16-19 years old (for young versus old adolescent classification, see Chapter 5, Section 5.1.1.). A possibility which may account for this finding is that teachers may use more lenient grading standards in junior high-school than senior high-school.

This result, however, may be due more to the parents' emphasis on the value of achievement and the younger adolescents' compliance with their parents. Although parents may want both young and old adolescents to perform well in school, younger adolescents may be more obedient to their parents and consequently, more disciplined in studying. Thus, they get higher grades. Filipino children are considered ideal children if they are deferent to their parents and diligent in their studies (Hollnsteiner, 1979b; Bulatao, 1973), and younger rather than older adolescents may be more influenced by their parents in living up to this expectation of being an ideal child.

7.2. The Path-Analytic Model of Achievement among Filipino-American/Canadian Students

The path-analytic model of Filipino achievement obtained in this study is discussed by considering the major predictors of GPA and its intermediate variables, as well as comparing it with other models of achievement cited in Chapter 1 of the present study. Further, this path-analytic model is to be examined in view of two things: (1) Watkins (1982a) path-analytic investigation of the antecedents of self-esteem, locus of control and academic achievement among Filipino students (see Chapter 3, Section 3.3); and, (2) Schludermann & Schludermann's (1980) conceptual model of achievement among Asian adolescents in North America (see Chapter 4, Section 4.1). This path-analytic model is interpreted within the context of the Filipino culture.

7.2.1. Direct Predictors of GPA

Three variables are found to be significant predictors of high grades: Student Involvement, Maternal Firm Control and Internal Attribution (see Chapter 6, Section 6.4.2.2.). In contrast, Authoritarian Style is found to be a significant predictor of low grades (see Chapter 6, Section 6.4.2.2.).

7.2.1.1. Student Involvement and GPA

Student Involvement is a pivotal variable in this study. It is the major link between the other significant predictors of GPA. Variables that have direct paths to Student Involvement

include Internal Attribution, Authoritative Style, Permissive Style and for the San Francisco sample alone, Parents' Education.

It is shown consistently through various statistical methods such as analysis of variance, correlation, stepwise regression and path analysis that Student Involvement is the most significant predictor of GPA. Student Involvement refers to a student's time and efforts spent in studying, trying harder to learn the subjects and improving when one gets poor grades, as well as avoiding absences in classes (see Chapter 4, Section 4.1). The results of this study lend evidence to previous research demonstrating that greater involvement by students in their school work results in higher academic achievement.

Two longitudinal studies that appropriately address the issues of high school attendance, retention and homework among Asian American high school students was cited by Hsia (1988) in their comprehensive book on Asian American education. These two longitudinal studies were sponsored by the National Center for Education Studies (NCES) of the Department of Education in the United States.

The National Longitudinal Study (NCS) began in 1972 when the Asian immigrant population was low and the High-School-and-Beyond (HS&B) study collected base year data in 1980 when the Asian American population doubled. Out of 75,000 high school sophomores and seniors in the 1980 longitudinal study, about 400 in each class identified themselves as Asian Americans (Hsia did not specify what Asians groups were included in the study).

Regarding the issue of drop-outs among Asian Americans, the following were obtained in the HS&B study: (1) In the first follow-up survey conducted in the Spring of 1982, it was found that three percent of Asian American sophomores dropped out in 1985. (2) In a summary report for Boston Public Schools, dropouts for high school with a substantial Southeast Asian enrollment (i.e., Vietnamese, Kampuchean & Laotian) had almost doubled over all Asian American 4-year cumulative rates to 27% for the 1985 graduating class. (3) Dropouts were characterized in this study to have "had lower test scores and school grades as sophomores, did less homework, had lower self-esteem and sense of control over their lives, had more discipline problems in school..." (Hsia, 1988, p.57).

On the positive side, however, the HS&B study showed that Asian American students had similar achievement-test scores as their White classmates and that they consistently exhibited that they performed better in mathematical skills than the White students (Peng, Owing & Fellers, 1984 in Hsia, 1988). It was further revealed that Asian Americans attended school more regularly, spent more time in homework, took college preparatory courses and stayed on through graduation.

In terms of attendance, 45% of the Asian American sophomores reported they were never absent from school (versus 36% of White students) and 42% stated they were never late (versus 46% of White students), although Peng et al. (1984, in Hsia, 1988) showed a weak negative relationship between absence, tardiness

and achievement-test scores. With respect to doing their homework, more than 50% of the Asian Americans in the HS&B study reported spending 5 to 10 hours, or more than 10 hours a week on homework, as opposed to less than 25% of their White classmates. The 1982 follow-up of 1980 HS&B sophomores indicated that students who did more homework had greater achievement scores in their sophomore-to-senior years (Rock et al., 1985 in Hsia, 1988).

Similarly, high-achieving Indochinese-refugee students spent an average of three-hours-and-ten-minutes per day during high school, an average of two-and-a-half-hours per day during junior high school, and an average of two-hours-and-five-minutes per day during grade school on their homework (Caplan, Choy & Whitmore, 1992). American students, on the other hand, spent about one-and-a-half hours during their junior and senior high-school years doing their homework. These findings are supported by the results of the present research, i.e., more time and efforts in school work are associated with higher grades.

7.2.1.2. Internal Attribution and GPA

The finding that Internal Attribution is associated with high grades is consistent with the existing literature (Rotter, 1966; Watkins, 1982a, 1982b; Watkins & Astilla, 1980b). Rotter's (1966) original conceptualization of locus of control into internal/external and its relationship with achievement is confirmed in this research.

Furthermore, studies employing Filipino samples such as those of Watkins (1982a, 1982b) and Watkins & Astilla (1980b) also suggested similar results, i.e., those who attribute success in school to internal causes tend to have high grades. Thus, the relationship between Internal Locus of Control and high achievement seems to be generalizable to different samples.

However, some theorists proposed different relationships. For instance, Wong and Sproule (1984) offered a reformulation of Locus of Control as a two-dimensional hypothesis as opposed to the traditional bipolar, unidimensional locus of control. According to them, the locus of causality refers to the source of causality such as persons, stimuli or circumstances whereas the locus of control deals with the assignment of responsibility. Wong and Sproule suggest a new definition of locus of control. That is, an individual may be internal in one area and external in another area; thus, may be considered both internal and external at the same time, or bilocal. For example, females may be internal in social studies but external in mathematics.

It is quite clear in the present study that Filipinos conceptualize the source of control to be either internal or external. Additionally, those who attribute success to internal sources tend to achieve better than those who attribute success to external sources (see Table 13, Chapter 6, Section 6.2.6.).

Weiner's (1986) model which is the framework employed in this research was only given partial support by the results of this study. Weiner proposed three dimensions of Attribution:

Stability, Locus, and Controllability, as opposed to Rotter's only one dimension, i.e., Locus. The results of this research partially showed Stability in two sources of attribution: "How difficult the examinations are" and "How difficult the assignments are". These two sources were categorized in this study under Task Difficulty dimension which may also be viewed as Unstable sources. Further, the third dimension found in this research consists of Luck and Fate/Destiny and were categorized under Controllability.

Thus, the sources of attribution found in the present study confirmed the three dimensions proposed by Weiner. However, Weiner further argued that it is the Stability, not the Locus, dimension that is associated with achievement. But the results of this research demonstrate a different dimension that tends to be associated with high GPA; more specifically, it is the Locus dimension identified as Internal Attribution.

7.2.1.3. Maternal Firm Control and GPA

The existing literature reveals that Firm Control is not conducive to students getting high grades. The extreme use of Firm Control, and not necessarily Firm Control itself, has negative consequences on the achievement of preschoolers (Hess & McDevitt, 1984). Mothers who are rigid, intolerant and restrictive have grade six children who did not achieve well in mathematics and reading (Banner, 1979). Parental restrictiveness was found to be associated with low achievement aspirations among

adolescent females (Douvan & Adelson, 1966).

However, when Firm Control is combined with High Acceptance, it usually results in high achievement (e.g., Nuttal & Nuttall, 1976). In this research, High Acceptance was found to characterize the parents in this sample as perceived by the adolescents.

It is then possible that Maternal Firm Control was viewed by the adolescents in this sample as nurturant caretaking by their mothers, rather than parental rejection. This is particularly true when one considers that Filipino mothers provide the major parenting and discipline in Filipino homes. Although major decisions are usually arrived at by both parents or at least endorsed by the father, the mother usually occupies the major parenting role in Filipino families (Almirol, 1982; Bulatao, 1973). Thus, adolescents accept the Firm Control that their mother provides in the context of concern and love that they need to achieve in school.

7.2.1.4. Authoritarian Style and GPA

The finding in this study sheds some light into the relationship between Authoritarian Style and achievement. Most studies using White samples show that the Authoritarian Style is associated with low grades and Authoritative Style, in general, is associated with high grades.

The original conceptualization of parenting styles based on combining several parenting dimensions was done by Baumrind

(1966). She conducted several studies that support the effectiveness of Authoritative Style (Baumrind, 1967, 1971). However, she demonstrated that in nonWhite samples, specifically a group of Black children, the most authoritarian parents produced the most self-assertive and independent girls (Baumrind, 1972).

Baumrind's conceptualization of parenting styles was reformulated by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987) in studying academic parenting styles among high school students from diverse cultural backgrounds. The results of Dornbusch et al.'s study indicated that there was a negative correlation between Authoritarian Style as well as Permissive Style and grades across ethnic groups.

However, it is interesting to note that the typology applied least well to Asians. That is, Asian boys and girls reported higher Authoritarian and lower Authoritative Style than the White students, yet the Asians as a group were receiving high grades in school (In this study, "Asians" was used to refer to several groups that included Filipinos).

The students were asked to choose one out of nine ethnic categories from among the following: Asian, black, Filipino, Pacific Islander, American Indian, Latino or Hispanic, White and other. Four groups were then formed based on sufficient sample sizes. Vietnamese respondents were categorized under Asians.)

However, a different finding was obtained in a follow-up study conducted by Dornbusch, Prescott & Ritter (1987) employing

half of the sample of their original study. In this study, the focus was on Asian and Pacific Islander students consisting of Chinese, Japanese, Indochinese, Filipino and Pacific Islanders. They examined the effects of recency of migration and generational differences on Asian- and Pacific-American students' academic performance, effort and self-esteem. Among Filipinos, there were only two generations of students unlike the Japanese, Chinese and Indochinese groups in which there were three generations of students.

The findings suggested that the Authoritarian Style remained constant across generation; however, there was a sharp decrease of self-reported grades from first to second generation. Thus, Authoritarian Style was associated with lower grades among second-generation Filipino Americans. In general, Authoritarian Style was more strongly associated with lower grades and less effort engagement among the second generation of the Japanese, Chinese, Indochinese and Filipino students. This finding was contrary to the general finding among Asians in the original study by Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987).

The present study appears to give some light to ethnic research, particularly on the Filipino adolescents in North America. It is interesting to note that the findings of the present study give support to the follow-up study by Dornbusch, Prescott & Ritter (1987).

One may account for this finding in terms of the fast assimilation of Filipinos to the mainstream society. Among

Asians, Filipinos have the strongest historical, political and economic ties with the United States (Brett, 1977; Crouchett, 1982; Mangiafico, 1988; Stern, 1989). Even in the Philippines, a "colonial mentality" (i.e., everything American is better) appears to be prevalent. Thus, when a Filipino comes to North America, he/she easily identifies with anything White/American.

Adolescents may then adopt the mainstream value of finding Authoritarian Style as generally negative and consequently detrimental to their achievement, similar to their White counterparts. Filipino parents may unconsciously encourage this thinking and value, although they may be more authoritarian in their parenting style than White parents.

7.2.2. The Intervening Variables Related to GPA

Based on the path-analytic model, there are also several intervening linkages to GPA. In other words, there are variables that are indirectly related to high GPA through their linkage with the direct predictors of GPA (see Table, Chapter 6, Section 6.). More specifically, these intermediate variables include the following: (1) Authoritative Style, (2) Permissive Style, (3) Importance of Family Reputation, and, (4) Parental Involvement with the students' school work.

Authoritative Style is related to GPA via Internal Attribution and Student Involvement because it has a direct path to both variables which in turn are directly related to GPA. Permissive Style is negatively related to GPA via its negative

paths to both Internal Attribution and Student Involvement which in turn have direct paths to GPA.

The Importance of Family Reputation is related to GPA via its direct path to Internal Attribution which in turn has a direct path to GPA. Parental Involvement, in the San Francisco sample only, has its intermediate path to Student Involvement through the Importance of Family Reputation and Student Involvement in turn has a direct path to GPA. In the San Francisco sample alone, Parents' Education also influences GPA through its direct relationship with Student Involvement. These variables will be discussed in the next subsections.

7.2.2.1. Authoritative Style

Authoritative style is found to be an antecedent of Student Involvement (see Chapter 6, Section 6.4.2.3.) as well as of Internal Attribution (See Chapter 6, Section 6.4.2.4.). In turn, Student Involvement and Internal Attribution are significant predictors of GPA. Thus, it can be inferred through these linkages that Authoritative Style tends to be associated with high grades. This result confirms the existing literature on Authoritative Style and academic achievement (Baumrind, 1966, 1967, 1971; Steinberg, Elmen & Mounts, 1989).

The study by Steinberg, Elmen & Mounts (1989) had a sample from Wisconsin and California. Although there were some Asians in this study, the sample was largely White. It was found that Authoritative Style had a positive effect in adolescent

adjustment which included self-reliance and school performance. However, in regard to GPA (as a measure of school performance), the positive effect of Authoritative Style on GPA was greater among White adolescents than among Asian- or African-American adolescents.

The result of this present research appears, thus, to be supportive of these similar findings. That is, there is a positive, but weak, relationship between Authoritative Style and GPA among Filipinos.

It is noteworthy, however, that both Authoritative and Authoritarian Styles were found to have a strong, positive relationship with Parental Involvement (See Chapter 6, Section 6.4.2.6.) Parental Involvement, on the other hand, has a weak and indirect link with GPA. Therefore, one may infer from these findings that Authoritative and Authoritarian Styles may be viewed as similarly contributing to high Parental Involvement.

Nevertheless, the direct effect of Authoritarian Style was clearly shown to be negative on GPA (See Chapter 6, Section 6.4.2.2.). Further, Parental Involvement does not have a direct positive relationship with GPA unlike Internal Attribution and Student Involvement. Thus, the conclusion that Authoritative Style has a positive but weak linkage with GPA is based on the indirect effect of Authoritative Style on Internal Attribution and Student Involvement, but not on its effect on Parental Involvement.

7.2.2.2. Permissive Style

Similarly, Permissive Style has been consistently shown to be associated with low grades (Baumrind, 1966, 1967, 1971; Dornbusch, Ritter, Leiderman, Roberts & Fraleigh, 1987; Dornbusch, Prescott & Ritter, 1987). Moreover, this relationship between Permissive Style and GPA exists across cultural groups. Thus, the finding in this research lends evidence to the existing literature particularly in view of confirming it within a specific cultural group, that of Filipino American adolescents.

More specifically, it indirectly confirms hypothesis 5 (see Chapter 6, Section 6.2.5). It is noteworthy that Permissive Style has been consistently found to have a negative relationship with variables that are positively related to GPA. For instance, it has a negative relationship with Internal Attribution and Student Involvement.

Permissive Style refers to low acceptance and low control (see Chapter 4, Section 4.1). While control or restrictiveness per se may not necessarily be detrimental to children's achievement (e.g., Banner, 1979; Baumrind, 1971; Becker, 1964), when combined with low acceptance it tends to show indifference or lack of concern on the part of the parents. This may then mean less student involvement with their school work, less motivation to achieve and a lower perception of their sense of control (i.e., internal attribution); and, consequently, lower grades.

7.2.2.3. Importance of Family Reputation

The Importance of Family Reputation variable was found to be directly linked to Internal Attribution, which in turn has a direct positive relationship with GPA. Thus, through its intermediate association with Internal Attribution, students who put a high value on the Importance of Family Reputation tend to have high grades.

Asian Americans as a group have always been known for their group/family orientation as opposed to the Western value of individualism and Filipinos are not exempt from this trend (Buduhan & Oandason, 1981; Jocano, 1979; Manlove, 1990; Yu & Liu, 1980). In regard to achievement, middle-class Americans foster independence and individual achievement, whereas Asians encourage interdependence and achievement that is based on and oriented towards family (Caplan, Choy & Whitmore, 1992; Slaughter-Defoe et al., 1990; Yao, 1979, 1985).

Indochinese children, for instance, who excelled in school, both in their GPA's and achievement test scores, were found to have a strong familial support (Caplan, Choy & Whitmore, 1992). This was particularly shown in terms of the assistance given by older siblings to their younger siblings such as helping them with their homework or by the parents to their children by regularly reading to them.

Japanese families were also known to emphasize both the need for achievement and the need for affiliation, nurturance and dependence (De Vos, 1973 in Slaughter-Defoe et al., 1990).

Japanese children were taught that their achievement reflected on their family and that parents sacrificed for their children's education; consequently, children had a moral obligation to repay their parents.

The parents' high expectations of their children to achieve in school are also influential in the children's actual school performance. This is indicated among various Asian groups such as the Chinese, Japanese and Korean children (Lee, 1987 in Slaughter-Defoe et al., 1990; Yao, 1985), Vietnamese (Caplan, Choy and Whitmore, 1992) and East Indian children (Yao, 1985).

Filipinos are similar to other Asians in terms of the emphasis and value put on family-based and family-oriented achievement (Buduhan & Oandason, 1981; Jocano, 1979; Manlove, 1990; Yu & Liu, 1980). Filipino parents, regardless of their socioeconomic status, send their children to school and encourage achievement for the whole family. An individual's success is considered a family pride and success. Likewise, one's failure may be a family shame or disgrace. Thus, the value put on the Importance of Family Reputation has an indirect effect on one's grades.

7.2.2.4. Parental Involvement

Parental Involvement was found to be positively associated with the Importance of Family Reputation which in turn was shown to be indirectly related to high grades (see this Chapter on Section 7.2.2.3). Several studies demonstrated the importance of

parents being involved with their children's school work.

Yao's (1985) study of Chinese, Korean, Filipino, East Indian and Vietnamese children showed that 50% of Asian parents were always involved with their children's homework as opposed to only one third of the American parents. Caplan, Choy & Whitmore's (1992) study of Indochinese refugee children revealed that parents of high-achieving children were engaged with the children's school work such as in reading regularly to young children. The results of the present study confirm the findings on the importance of parents' involvement in school work in promoting school success.

7.2.2.5. Parents' Education

In the San Francisco sample only, Parents' Education was found to have a strong, positive relationship with Student Involvement which in turn was the strongest predictor of GPA. In the Winnipeg sample, there was a positive, but insignificant, relationship between Parents' Education and Student Involvement.

Parental Education has been the most stable component of the family's social class and in recent years, has been used to indicate socioeconomic status instead of occupation or income. Also, beliefs and values about childrearing have been explained through the parents' education (Featherman et al., 1988 in Steinberg, 1990).

Dornbusch, Ritter, Leiderman, Roberts & Fraleigh (1987), for instance, found that Authoritative Style is most common among

highly educated parents. As shown in most students, Authoritative Style is most conducive to high achievement among children (see this chapter, Section 7.2.2.1.).

The findings in this study are clear in the San Francisco sample. This may be due to a broader variety of parents' educational background in the San Francisco sample. In the Winnipeg sample, there may not have been enough diversity of the parents' educational backgrounds to be able to discriminate and use Parents' Education as a significant variable.

The parents' high education which is at least college education may facilitate parental involvement in studies and thus encourage greater participation among students with their school work. Also, parents with higher education may influence their children's interest in school. As a result of the parents' involvement, the students get more involved with their school work.

7.2.3. Comparison with other Models of Achievement

The model of achievement developed in this study is obtained through path analytic procedures and it includes several variables found relevant to academic achievement of the specific sample in this study i.e., the Filipino students in San Francisco and Winnipeg. This path-analytic model will be compared to the three models presented in Chapter 1 of this research. These models are: Atkinson's theory of achievement motivation (1974), Rotter's theory of achievement based on locus of control (1966),

and Weiner's theory of achievement as a function of the stability of attribution (1986).

In addition, this path-analytic model will be examined in view of Watkins' (1982a) path analytic study of the antecedents of academic achievement among Filipino children. Watkins' (1982a) investigation appears to be the closest and most similar research to the present study among the reviewed literatures. Finally, this path-analytic model will also be discussed according to Schludermann & Schludermann's conceptual model of achievement among Asian adolescents in North America (1980).

7.2.3.1. Atkinson's theory of Achievement Motivation

7.2.3.1.1. Partial Support for Atkinson's theory:

Atkinson's theory emphasizes intrinsic factors in achievement such as motive and incentive (see Chapter 1, Section 1.1.3). When compared to the path-analytic model found in this research, these factors may be considered in terms of the role they play in Student Involvement variable. That is, students may get more involved with their school work when they find this task moderately difficult and that they continue to achieve depending on their initial success or failure in the task. Thus, students study hard and get good grades. The harder they study and get involved with school work, the higher their motive to achieve gets. They succeed initially and expect to succeed more, thus, Student Involvement increases.

Moreover, there is also the presence of Parental Involvement

and Importance of Family Reputation which may influence the students' motive and incentive in academic achievement. As shown consistently, the more involved the parents are with their children's school work, the greater the student involvement which in turn may increase their success and consequently increase their motive to achieve.

Likewise, the Importance of Family Reputation may serve as an incentive for students to succeed. Even when they fail several times, they may keep trying to achieve because of a stronger incentive; although in this case, the incentive is external/extrinsic. That is, they think of the pride that their success brings to their family or of the disgrace that their failure causes their family.

7.2.3.1.2. Limitations of Atkinson's theory

It appears that Atkinson's model may have some features that can account for the findings in this research. Nevertheless, there are still several factors in this research influencing achievement that cannot be completely accounted for by this model.

For instance, socialization variables (e.g., Authoritarian Style & Maternal Firm Control) do not necessarily fall within any of Atkinson's factors of achievement. Also, cultural characteristics such as Importance of Family Reputation and Parents' Education are not clearly explained in Atkinson's model.

7.2.3.2. Rotter's Locus of Control and Achievement

7.2.3.2.1. Support for Rotter's theory:

Rotter's (1966) model is based on social-learning theory and its concept of reinforcement which states that reinforcement strengthens an expectancy that a specific behavior or event will be followed by that reinforcement in the future (see Chapter 1, Section 1.1.4). Consequently, an individual develops a history of reinforcement.

Generally, when the reinforcement is perceived by an individual as noncontingent on one's behavior, the expectancy for its occurence or nonoccurence will not be as strong as when it is contingent. Rotter also postulates that high achievers tend to have an internal locus of control. These are people who have some belief in their own ability or skill.

Rotter's theory may be closest in explaining a major variable of achievement found in the present study, that of Internal Attribution. It was consistently shown through several analyses that students who attribute their success to Internal Causes such as "My Ability", "How hard I tried", "How much I prepared", etc. have higher GPA's than those students who attribute success to external causes.

This finding also strengthens Rotter's contention that it is the locus, or location, of control and not other characteristics of the source or cause of achievement that accounts for achievement. Thus, the results in the present study related to Internal Attribution lends support to Rotter's theory.

7.2.3.2.2. Limitations of Rotter's theory

However, the issue remains that this model is not complete in accounting for the other variables of achievement found in this research. As mentioned in the previous section, several variables of achievement particularly cultural and familial are difficult to explain through this model.

7.2.3.3. Weiner's Stability of Attribution

7.2.3.3.1. Support for Weiner's theory

Weiner (1986) identified three dimensions of causality: locus, stability, and control (see Chapter 1, Section 1.1.5.). In this study, these three dimensions were obtained (see Chapter 6, Section 6.3.2.). Factor 1 or Internal Attribution refers to the locus or location of the sources of attribution. Factor 2 or Task Difficulty refers to Weiner's stability dimension, although in this study it was limited only to the characteristics of the task, particularly its difficulty. Factor 3 or Luck & Fate/Destiny refers to the controllability dimension postulated by Weiner.

7.2.3.3.2. Limitations of Weiner's theory

Weiner asserts that the stability of a cause influences the expectancy of success, that is, if an individual attributes the outcome of an achievement task to a stable cause, then that outcome will be anticipated with increased certainty or expectancy in the future. However, no evidence was obtained to

support its postulation on Stable Attribution and achievement. On the contrary, Locus, as proposed by Rotter, was found to be the main determinant of achievement, more specifically that of Internal Attribution.

7.2.3.4. Watkins' Path-Analytic Investigation of Academic Achievement among Filipino Children

Watkins (1982a) conducted a path-analytic investigation of academic achievement among Filipino high-school students in the Philippines to determine the antecedents of self-esteem, locus of control and academic achievement. Although Watkins does not propose a model or a theory on achievement, his study is similar to the present study in three ways: the sample is Filipino, the dependent variable is grades, and the method is path analysis.

The results of Watkins' study are discussed in Chapter 3, Section 3.3. Five variables were postulated to be antecedents of academic achievement, namely: IQ, self-esteem, locus of control, gender and quality of family relationships. It was shown that IQ was the major determinant of academic achievement, followed by locus of control. There was a slight relationship as well between self-esteem and academic achievement, but insignificant. Gender of the subjects and the quality of family relationships were not found to be affecting academic achievement.

Regarding self-esteem, it was found that the antecedents of high self-esteem included higher IQ, male gender, and satisfactory family relationships. The antecedents of internal

locus of control, on the other hand, included higher IQ and female gender. There was no association postulated between self-esteem and locus of control.

An important similarity between the findings of Watkins and this research is in terms of the role of internal attribution. Internal attribution was found to have a significant, although small, association with academic achievement. This lends support to the results of this study that students who attribute their academic success to internal causes tend to have higher academic achievement.

Consequently, through its significant path to internal locus of control, females can also be considered indirectly linked to academic achievement in Watkins' study. Although this association is more obvious in this present research, the conclusion still remains that females tend to have higher academic achievement than males. It is possible that because the sample of Watkins's study came from the Philippines, the traditional belief and practice probably holds true with Filipino parents in the Philippines. That is, parents in the Philippines may not encourage their daughters as much as the boys, whereas the immigrant parents in California encourage their daughters to achieve equally, if not more, with the boys for economic reasons.

The major similarity, however, with Watkins' investigation and the present study is the clear presentation of several variables influencing academic achievement, measured through grades. Watkins obtained the path-analytic relationships between

the Background variables of the parents and the children (e.g., IQ, gender, socio-economic status, family relationships) and the Personality variables of the children (e.g., self-esteem and locus of control) with academic achievement measured through grades. The results of Watkins' path analysis confirmed his proposed structural model linking these variables with grades.

In the present study, an analogous set of relationships was obtained through the path-analytic model of achievement among Filipino adolescents. Although the specific independent variables differed from Watkins' investigation, it was demonstrated that academic achievement is influenced by a host of variables which include one's family and parental background information as well as the students' personality characteristics.

7.2.3.5. A Comparison with the Conceptualized Model of Achievement among Asian Adolescents in North America (Schludermann & Schludermann, 1980)

As earlier discussed in Chapter 4, Section 4.1, the objectives of this research were formulated on the basis of a conceptual model linking several variables with academic achievement or grades. The results of the path-analytic model supported the underlying concept of a complex set of variables impacting on each other and consequently on grades.

More specifically, these variables and their relationships with grades are the following:

(1) Parents' Education and Parents' Involvement in studies

under Demographic and Family Variables: High Parents' Involvement and high Parental Education are related to high grades.

(2) Maternal Firm Control under general Parental Socialization: Maternal Firm Control is associated with high grades.

(3) Academic Socialization styles: Authoritarian Style is strongly shown to be associated with low grades; Permissive Style is indirectly a cause of low grades; and Authoritative Style is also indirectly related to high grades.

(3) Students' Responses, in terms of Student Involvement, Internal Attribution, and Importance of Family Reputation: All three variables are causes of high grades, particularly Student Involvement and Internal Attribution.

These results therefore provide support for the conceptual model used in the present study. The path-analytic model clearly suggests the strength and direction of the relationships between these three groups of independent variables and grades. Although the present study does not claim to have this path-analytic model as the only possible explanation of the relationships between the independent variables and grades, it suggests a comprehensive way to look at these relationships and it made the conceptual model of achievement used in the study more concrete.

7.2.4. An Interpretation of the Path-Analytic Model of Achievement in the Context of the Filipino Culture

The proposed model of achievement in the present study indicates the significance of the cultural context of this research. It would be difficult to interpret the results of this study without considering the Filipino cultural traits and characteristics. In particular, three issues should be addressed in view of a Filipino sample. These include the following:

(1) the characteristics that Filipinos share with the mainstream society;

(2) the pivotal role of the Filipino family in the adolescents' academic success; and,

(3) the changes that Filipinos experience as an immigrant group in North America.

7.2.4.1. Characteristics that Filipinos Share with the Mainstream Society

There are two strong predictors of high grades that are consistently shown in this study: Internal Attribution and Student Involvement in their school work. This finding reveals the characteristics of the learner, or the individual, that affect achievement. It is noteworthy that the results of this research confirm the achievement literature regardless of the sample's cultural background.

The fact that Internal Attribution and High Student Involvement in school work are significant predictors of

achievement seem to be consistent across cultures. For instance, studies employing Filipinos, both in the Philippines and North America, show that Internal Attribution is a strong predictor of high grades.

Thus, regardless of the society that the Filipinos live in, it appears that this variable has a positive relationship with GPA. Similarly, the individual traits of a learner of being actively involved with the learning task appears to be universal and not necessarily culture-bound. These results then indicate the characteristics that Filipinos share with other cultural groups.

7.2.4.2. The Role of the Filipino Family in Adolescent Achievement

The family occupies a pivotal role in the achievement of Filipino adolescents. While achievement is generally viewed in North American society as an individualistic behavior, Filipinos, like other Asian and immigrant groups, consider it as a family effort. Two important variables of high grades were noted in this research: Parental Involvement in the students' school work and the Importance of Family Reputation.

Filipino adolescents recognize the support of their parents if they are to succeed in school. In addition, one's achievement has a bearing in how the family is perceived in the community. In other words, Filipino students believe that their success in school pleases their parents, brings pride to their family and

thus, they regard their family reputation highly. Filipino parents may encourage achievement in their children for their children's own sake, that is, education as a means for them to improve socially and economically.

Nevertheless, parents also instill in their children the value of achievement for the sake of the whole family. This confirms the group- or family-orientation of Filipino society as opposed to the individualistic orientation in North America.

7.2.4.3. Changes that Filipinos Experience as an Immigrant Group

Despite the traditional cultural traits and values that Filipinos demonstrate in North America, it is also undeniable that Filipinos undergo changes similar to any typical immigrant group. One outstanding result in this research is that of a negative correlation between Authoritarian Style and grades.

The limited studies in ethnic research are inconclusive; however, the results in the Filipino sample resemble those studies employing White samples. This is particularly true of the second-generation Filipino adolescents who would have assimilated into the mainstream society. This tends to confirm the changing nature of any immigrant group that eventually adopts the values and characteristics of the mainstream society. Overall, however, the results of the study indicate a balance of both the old, traditional characteristics and values of the Filipinos and the new values they have adopted from the North American society.

CHAPTER 8: CONCLUSION

This study provided information as to the variables influencing academic achievement among Filipino adolescents in California and Winnipeg. It has its limitations in terms of the unavailability of GPA in the Winnipeg sample and thus its inability to do a comparative study between San Francisco and Winnipeg students. Nevertheless, it has given some light as to the significant predictors of GPA conceptualized through a model confirmed by path analysis. This proposed model of achievement among Filipino adolescents in Canada and the United States confirms the importance of culture-related variables of academic achievement. This concluding chapter will discuss the implications and applications of this research, as well as its significance.

8.1. Implications and Applications of the Present Study

The present study has important implications and applications to the Filipino community in Canada and the United States, the immigrant groups in general, and the group of researchers and psychologists particularly those interested in adolescent development and achievement. This research has specific findings that can improve the achievement of Filipino students in North America, and may also be generalized to other immigrant groups.

It is also a significant contribution to ethnic research. Finally, it challenges researchers and psychologists to consider a cultural model of achievement that is specific to the Filipino group but may also apply to other ethnic groups.

8.1.2. Improving Achievement

In this study, factors were identified that correlate with high grades. Ways may be developed and applied to help improve academic achievement among Filipinos, and maybe in other ethnic groups as well.

8.1.2.1. Encouraging greater student involvement in their school work: Parents and educators may provide more opportunities for students to be more actively involved in their school work. Parents can motivate their children to participate more in their studies and teachers can assign tasks in school where the students are active learners and participants in school work.

8.1.2.2. Modifying the students' perception of the causes of success and failure in school work by increasing their belief in internal attribution: The two sources of Internal Attribution are Ability and Effort. In this research, Effort specifically referred to two items: "How much I tried hard in my assignments" and "How much I prepared for examinations."

Although most students may perceive Ability to be beyond their control, this is not necessarily true of Effort. That is,

most adolescents may perceive that they can always increase their efforts in studying if they are motivated to do so.

In that case, changes can focus on modifying the students' belief in Internal Attribution from Ability to Effort. They will then tend to persist longer at their task and thereby increase their performance.

Some attribution change programs or retraining such as these have been done to modify students' perception of academic success and failure to increase achievement. Also, parents may be encouraged and taught more authoritative ways of parenting as Authoritative Style has been indicated to increase belief in effort management (e.g., Dornbusch, Prescott & Ritter, 1987), and consequently, increased achievement.

8.1.2.3. Increasing parental involvement in their children's school work: Programs or seminars may be given to parents as well, either by educators or by the parents themselves through parent associations to teach them ways of getting effectively involved with their children's school work. The students themselves may also provide ideas and suggestions to their parents as to how their parents can be more helpful to them.

These parent training programs are particularly important for parents who are new immigrants or those who are new in parenting adolescents. These programs can provide orientation to the newcomers about the North American educational system and serve as a support group to parents of teenagers.

8.1.2.4. Teaching parents parenting styles that are effective in adolescent school achievement: With increasing evidence that Authoritarian Style is not conducive to academic achievement, Filipino parents, who are typically authoritarian, may be taught alternative ways of parenting such as that of Authoritative Style. These parenting programs may be integrated with the proposed training on more parental involvement.

8.2. Significance of the Present Study

This study has made two important contributions to the area of achievement among Filipino adolescents: it provides additional literature in the area of achievement in ethnic research and it provides a model of achievement that is adapted to the Filipino culture.

8.2.1. Additional Ethnic Literature

This study contributes significantly to ethnic research especially to Filipino immigrant research in North America. As cited earlier, an extensive literature review in Asian American families and achievement was done by Slaughter-Defoe, Nakagawa, Takanishi and Johnson in 1990 that revealed the scarcity of ethnic literature in achievement. The authors identified fewer than 25 published articles from the 1970's to the 1980's.

A similar statement may be made of any literature review pertaining to ethnic research in any other areas. Among Filipinos, very few studies have been done on achievement, the

family, attribution and adolescent development which are some of the major areas covered in the present study. The need for more studies in the Filipino community is called for in view of the fact that it is one of the largest Asian immigrant groups in the United States. A major limitation of most ethnic research is overlooking the diversities of Asian American families and lumping these groups into one general term Asian American despite the existence of varied groups such as Chinese, Japanese, Vietnamese and the like. Likewise, they may differ in generations and language abilities.

The present study sheds some light into the characteristics of Filipinos in North America. It is more interesting and informative because of the presence of two different samples consisting of American and Canadian groups. This makes the results generalizable to Filipinos in these two countries.

8.2.2. The Need to Consider a Cultural Model of Achievement

Finally, the results of this study pose a challenge to researchers and social scientists in the area of achievement and adolescent development to consider a cultural model of achievement. Several theoretical models of achievement consider the several factors included in this research such as the socialization, attribution and the family.

However, there is no model that integrates all of these variables. Most of the literature studies these factors separately employing White samples. The proposed conceptual

model as confirmed by the path-analytic study indicates the importance of the individual and familial variables of achievement that need to be integrated and interpreted within the cultural context of the sample, i.e., the Filipino adolescents in Canada and the United States.

Further research may replicate this study on other Filipino groups in the United States to verify the model's generalizability. It may also be used with other Asian groups or other immigrant groups such as the Latinos. It would be interesting to know how a cultural model of achievement that evolved from one ethnic group applies to other similar groups in North America.

8.3. Summary of the Present Study

The identified path-analytic model of GPA in the San Francisco sample revealed three significant predictors of high GPA: Student Involvement, Internal Attribution, and Maternal Firm Control. Authoritarian Socialization is associated with low grades. Some variables have indirect positive effects on GPA: Importance of Family Reputation, Parental Involvement, Parents' Education, and Authoritative Socialization. Permissive Socialization is indirectly related to low grades. These relationships are clearly demonstrated in the proposed path-analytic model of achievement obtained in this study. The significant role of culture in the existence of these variables is confirmed in the present study.

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Appendix A

CHILDREN'S REPORT OF PARENTAL BEHAVIOR INVENTORY

As children grow up to be teenagers and young adults, they learn more and more about their parents and how their parents are bringing up (or brought up) their sons and daughters. Even grown-up sons and daughters can well describe some of their experiences in their parental families. We would like you to describe some of these experiences. Please read each statement on the following pages and circle the answer that most closely describes the way each of your parents acts toward you. BE SURE TO MARK EACH ANSWER FOR EACH PARENT.

If you think that the statement describes a person NOT LIKE your parent, circle 1. If you think that the statement describes a person SOMEWHAT LIKE your parent, circle 2. If you think that the statement describes a person A LOT LIKE your parent, circle 3.

1= Not Like; 2= Somewhat Like; 3= A Lot Like.

FORM FOR MOTHER

MY MOTHER IS A PERSON WHO...

1) ...makes me feel better after talking over my worries with her. 1 2 3

2) ... tells me of all the things she had done for me. 1 2 3

3) ...believes in having a lot of rules and sticking with them.

1 2 3

1= Not Like; 2= Somewhat Like; 3= A Lot Like.

4) ...smiles at me very often. 1 2 3

5) ...says, if I really cared for her, I would not do things that cause her to worry. 1 2 3

6) ...insists that I must do exactly as I am told. 1 2 3

7) ...is able to make me feel better when I am upset. 1 2 3

8) ...is always telling me how I should behave. 1 2 3

9) ...is very strict with me. 1 2 3

10) ...enjoys doing things with me. 1 2 3

11) ...would like to be able to tell me what to do all the time. 1 2 3

12) ...gives hard punishment. 1 2 3

13) ...cheers me up when I am sad. 1 2 3

14) ...wants to control whatever I do. 1 2 3

15) ...is easy with me. 1 2 3

16) ...gives me a lot of care and attention. 1 2 3

17) ...is always trying to change me. 1 2 3

18) ...lets me off when I do something wrong. 1 2 3

19) ...makes me feel like the most important person in her life. 1 2 3

20) ...only keeps rules when it suits her. 1 2 3

21) ...gives me as much freedom as I want. 1 2 3

22) ...believes in showing her love for me. 1 2 3

23) ...is less friendly with me, if I do not see things her way. 1 2 3

24) ...lets me go any place I please without asking. 1 2 3

1= Not Like; 2= Somewhat Like; 3= A Lot Like.

25) ...often praises me. 1 2 3

26) ...will avoid looking at me when I have disappointed her.

27) ...lets me go out any evening I want. 1 2 3

28) ...is easy to talk to. 1 2 3

29) ...if I have hurt her feelings, stops talking to me until I please her again. 1 2 3

30) ...lets me do anything I like to do. 1 2 3

FORM FOR FATHER

MY FATHER IS A PERSON WHO...

31) ...makes me feel better after talking over my worries with him. 1 2 3

32) ... tells me of all the things he had done for me. 1 2 3

33) ...believes in having a lot of rules and sticking with them. 1 2 3

34) ...smiles at me very often. 1 2 3

35) ...says, if I really cared for him, I would not do things that cause him to worry. 1 2 3

36) ...insists that I must do exactly as I am told. 1 2 3

37)...is able to make me feel better when I am upset. 1 2 3

38) ...is always telling me how I should behave. 1 2 3

39) ...is very strict with me. 1 2 3

40) ...enjoys doing things with me. 1 2 3

41) ...would like to be able to tell me what to do all the time.

42) ...gives hard punishment. 1 2 3

1= Not Like; 2= Somewhat Like; 3= A Lot like.

43) ...cheers me up when I am sad. 1 2 3

44) ...wants to control whatever I do. 1 2 3

45) ...is easy with me. 1 2 3

46) ...gives me a lot of care and attention. 1 2 3

47) ...is always trying to change me. 1 2 3

48) ...lets me off when I do something wrong. 1 2 3

49) ...makes me feel like the most important person in his life.

50) ...only keeps rules when it suits him. 1 2 3

51) ...gives me as much freedom as I want. 1 2 3

52) ...believes in showing his love for me. 1 2 3

53) ...is less friendly with me, if I do not see things his way.
1 2 3

54) ...lets me go any place I please without asking. 1 2 3

55) ...often praises me. 1 2 3

56) ...will avoid looking at me when I have disappointed him.
1 2 3

57) ...lets me go out any evening I want. 1 2 3

58) ...is easy to talk to. 1 2 3

59) ...if I have hurt his feelings, stops talking to me until I please him again. 1 2 3

60)...lets me do anything I want to do. 1 2 3

THANK YOU FOR YOUR PARTICIPATION!

Appendix B

SCHOOL AND FAMILY QUESTIONNAIRE FOR THE WINNIPEG SAMPLE

There are two questionnaires I'll ask you to answer. The first one is the "School and Family Questionnaire" (SFQ) while the second one is the "Questionnaire for Children and Youth" (CRPBI-30). The SFQ contains items about your school work such as time and efforts you spend studying, interest in various subjects, grades, what you think causes your doing well or poorly in school, etc. as well as your parents' involvement with your school work. The CRPBI-30 has questions about your relationship with your parents. Specifically, these are items on how you think your parents bring you up. Please circle the appropriate responses right after each question.

I asked your parents to let you join this study. But if you don't feel like joining, you are free to say no. Also, if you don't want to answer some of the questions, you are free not to answer; although I have worded the questions very carefully and would appreciate getting all responses from you. If at some point, you don't feel like finishing the questionnaires, you may do so. But again, I would like your utmost cooperation. I hope that you will enjoy this experience. Thank you very much for your cooperation.

Lilia P. Salazar

SCHOOL AND FAMILY QUESTIONNAIRE

Sex:_____ Age:_____ School:_____Grade:_____

Please circle the appropriate responses from 1-5.

BACKGROUND INFORMATION

1) What is your mother's educational background?

No mother= 1;
Less than high school or high school completed= 2;
Some college or vocational school= 3;
Four-year college= 4;
Graduate or professional degree= 5.

2) What is your father's educational background?

No father= 1;
Less than high school or high school completed= 2;
Some college or vocational school= 3;
Four-year college= 4;
Graduate or professional degree= 5.

3) What is your mother's occupation?

No occupation= 1;
Manufacturing (e.g.,in factories) or Services (e.g, cleaning)= 2;
Office or Clerical= 3;
Technical or Professional= 4;
Has own business = 5.

4) What is your father's occupation?

No occupation= 1;
Manufacturing (e.g.,in factories) or Services (e.g, cleaning)= 2;
Office or Clerical= 3;
Technical or Professional= 4;
Has own business = 5.

5) When you were a child what was the first language which was spoken in your home?

English= 1;
Tagalog= 2;
Ilokano= 3;
Ilonggo/Cebuano= 4;
Another Filipino dialect= 5.

6) How many rooms are in your house, not including hallways or bathrooms (but including kitchen, living room, etc.) ?

3 rooms= 1;
4 rooms= 2;
5 rooms= 3;
6 rooms= 4;
7 rooms or more= 5.

7) Do you have a quiet place in your home to study or to do your homework? Yes= 1 No= 2

8) Where do you usually study?
At home= 1;
At a friend's home= 2;
At the library= 3;
At school= 4;
I don't study= 5.

9) Are there a radio, a stereo, or a "walkman" in the room where you study or do your homework, and is it "on" when you study?

No, not in the room= 1;
Yes, but not when I study= 2;
Yes, sometimes when I study= 3;
Yes, usually when I study= 4.

SCHOOL WORK AND ACTIVITIES

10) How would you describe most of the subjects you are taking?

Special education= 1;
Remedial or special skills= 2;
Vocational or business= 3;
General= 4;
University preparation= 5.

11) Which of the following best describes your grades so far in high school?

Mostly below D's= 1;
Mostly D's= 2;
Mostly C's or about half C's and D's= 3;
Mostly B's or about half B's and C's= 4;
Mostly A's or about half A's and B's= 5.

12) WHAT FEELING DO YOU HAVE ABOUT YOUR GRADES?

a feeling of success= 1;
a feeling of failure= 2.

HOW IMPORTANT ARE THE FOLLOWING CAUSES IN YOUR FEELING OF SUCCESS OR FAILURE ABOUT YOUR GRADES?

Not at all important= 1;
Somewhat Important= 2;
Important= 3;
Very important= 4;
Extremely Important= 5.

13) My Ability. 1 2 3 4 5

14) How hard I tried in my subjects. 1 2 3 4 5

15) How much I prepared for the assignments and examinations.
1 2 3 4 5

16) How difficult the assignments and exams are. 1 2 3 4 5

17) How difficult the subjects in general are. 1 2 3 4 5

18) My interest in the subjects being tested. 1 2 3 4 5

19) The teachers' explanation of the material in the subjects.
1 2 3 4 5

20) The conditions at home being suitable for study.
1 2 3 4 5

21) Luck. 1 2 3 4 5

22) Fate or destiny. 1 2 3 4 5

23) What grades do you <u>expect</u> to get in the next term?

Mostly below D's=1;
Mostly D's= 2;
Mostly C's or about half C's and D's= 3;
Mostly B's or about half B's and C's= 4;
Mostly A's or about half A's and B's= 5.

24) How far would you <u>like</u> to go in school (check only one)?

Quit school as soon as possible= 1;
Finish high school= 2;
Get some community-college training
after high school= 3;
Obtain a four-year university degree= 4;
Obtain a university degree and then take further
training (medical school, law school, graduate
school, etc.)= 5.

25) How far do you <u>expect</u> to go in school (check only one)?

Quit school as soon as possible= 1;
Finish high school= 2;
Get some community-college training after high school= 3;
Obtain a three-year or four-year university degree= 4;
Obtain a university degree and then take further training (medical school, law school, graduate school, etc.)= 5.

HOW INTERESTED ARE YOU IN THE FOLLOWING SUBJECTS?

I have never taken this subject= 1;
Not at all interested= 2;
Somewhat interested= 3;
Interested= 4;
Extremely interested= 5.

26) Mathematics?	1	2	3	4	5
27) English?	1	2	3	4	5
28) Social Studies? (or History)	1	2	3	4	5
29) Science?	1	2	3	4	5
30) Vocational/Business? (e.g., Shop, Home Economics)	1	2	3	4	5

HOW HARD DO YOU TRY TO GET GOOD GRADES IN EACH OF THE FOLLOWING SUBJECTS?

I have never taken this subject= 1;
Not at all hard= 2;
Somewhat hard= 3;
Hard= 4;
Extremely hard= 5.

31) Mathematics?	1	2	3	4	5
32) English?	1	2	3	4	5
33) Social Studies? (or History)	1	2	3	4	5
34) Science?	1	2	3	4	5
35) Vocational/Business? (Shop or Home Economics)	1	2	3	4	5

EVERYONE GETS A POOR GRADE SOMETIMES. WHEN YOU GET A POOR GRADE IN ANY OF THE FOLLOWING SUBJECTS, HOW HARD DO YOU TRY TO GET A BETTER GRADE?

I have never taken this subject= 1;
Not at all hard= 2;
Somewhat hard= 3;
Hard= 4;
Extremely hard= 5.

36) Mathematics? 1 2 3 4 5

37) English? 1 2 3 4 5

38) Social Studies? 1 2 3 4 5
(or History)

39) Science? 1 2 3 4 5

40) Vocational/Business? 1 2 3 4 5
(or Shop and Home Economics)

EVERYONE GETS A GOOD GRADE SOMETIMES. WHEN YOU GET A GOOD GRADE IN ANY OF THE FOLLOWING SUBJECTS, WHICH REASON USUALLY CAUSES THE GOOD GRADE? (GIVE THE <u>ONE BEST</u> REASON FOR EACH SUBJECT) :

I have never taken this subject= 1;
I was lucky= 2;
The subject was easy= 3;
I worked hard= 4;
I am good at this subject= 5.

41) Mathematics? 1 2 3 4 5

42) English? 1 2 3 4 5

43) Social Studies? 1 2 3 4 5
(or History)

44) Science? 1 2 3 4 5

45) Vocational/Business? 1 2 3 4 5
(or Shop & Home Economics)

EVERYONE GETS A POOR GRADE SOMETIMES. WHEN YOU GET A POOR GRADE IN ANY OF THE FOLLOWING SUBJECTS, WHICH REASON USUALLY CAUSES THE POOR GRADE (GIVE THE ONE BEST REASON FOR EACH SUBJECT):

I have never taken this subject= 1;
I had bad luck= 2;
The subject was hard= 3;
I didn't work hard enough= 4;
I am not good at this subject= 5.

46) Mathematics? 1 2 3 4 5

47) English? 1 2 3 4 5

48) Social Studies? 1 2 3 4 5
(or History)

49) Science? 1 2 3 4 5

50) Vocational/Business?1 2 3 4 5
(or Shop & Home Economics)

WHEN YOU FIND THAT YOU ARE NOT LEARNING ANY OF THE FOLLOWING SUBJECTS, HOW HARD DO YOU TRY TO DO BETTER?

I have never taken this subject= 1;
Not at all hard= 2;
Somewhat hard= 3;
Hard=4;
Extremely hard= 5.

51) Mathematics? 1 2 3 4 5

52) English? 1 2 3 4 5

53) Social Studies? 1 2 3 4 5
(or History)

54) Science? 1 2 3 4 5

55) Vocational/ 1 2 3 4 5
Business?
(or Shop & Home Economics)

56) Approximately what is the total amount of time you currently spend on homework on each week, including reading assignments?

No homework is ever assigned= 1;
I have homework but I don't do it= 2;
Between 1-5 hours a week= 3;
Between 6-10 hours a week= 4;
10 or more hours a week= 5.

FOR EACH CLASS, HOW MUCH TIME DO YOU CURRENTLY PUT INTO HOMEWORK EACH WEEK, INCLUDING READING ASSIGNMENTS?

None= 1;
About 15-30 minutes a week= 2;
About an hour a week= 3;
About 2 or 3 hours a week= 4;
About 4 or more hours a week= 5.

57)	Mathematics?	1	2	3	4	5
58)	English?	1	2	3	4	5
59)	Social Studies? (or History)	1	2	3	4	5
60)	Science?	1	2	3	4	5
61)	Vocational/Business? (or Shop & Home Economics)	1	2	3	4	5

HOW OFTEN DO YOU AVOID EACH OF THESE CLASSES BY GETTING AN <u>EXCUSED</u> ABSENCE?

I have never taken this subject= 1;
Once or twice a week= 2;
A few times a month= 3;
A few times a year= 4;
I never avoid classes= 5.

62)	Mathematics?	1	2	3	4	5
63)	English?	1	2	3	4	5
64)	Social Studies? (or History)	1	2	3	4	5
65)	Science?	1	2	3	4	5
66)	Vocational/Business? (or Shop & Home Economics)	1	2	3	4	5

HOW OFTEN DO YOU CUT (UNEXCUSED ABSENCE) EACH OF THESE CLASSES?

67) Mathematics? 1 2 3 4 5

68) English? 1 2 3 4 5

69) Social Studies? (or History) 1 2 3 4 5

70) Science? 1 2 3 4 5

71) Vocational/Business? (or Shop & Home Economics) 1 2 3 4 5

FAMILY INVOLVEMENT IN SCHOOL

72) When was the last time that any parent, stepparent, or guardian joined or left your household?

Never any change of parent or guardian= 1;
5 to 10 years ago= 2;
About 3 to 4 years ago= 3;
1 or 2 years ago= 4;
Within the last year= 5.

73) How many brothers (or stepbrothers) now live in your household?

1= 1; 2= 2; 3= 3; 4 or more= 4; None= 5.

74) How many sisters (or stepsisters) now live in your household?

1= 1; 2= 2; 3= 3; 4 or more= 4; None= 5.

75) How many grandparents now live in your household?

1= 1; 2= 2; 3= 3; 4 or more= 4; None= 5.

76) How many other adult male or female relatives (uncles, aunts, cousins above 20 years, etc.) now live in your household?

1= 1; 2= 2; 3= 3; 4 or more= 4; None= 5.

77) How many other children or teenagers (e.g., cousins below ages 20 years) now live in your household?

1= 1; 2= 2; 3= 3; 4 or more= 4; None= 5.

78) How long have you lived in Canada?

Less than one year= 1;
1 to 4 years= 2;
5 to 9 years= 3;
10 to 14 years= 4;
15 to 19 years= 5.

79) How much is your mother (or stepmother, female guardian) involved in your high school education?

Not at all involved= 1;
Slightly involved= 2;
Moderately involved= 3;
Very involved= 4;
Extremely involved= 5.

80) How much is your father (or stepfather, male guardian) involved in your high school education?

Not at all involved= 1;
Slightly involved= 2;
Moderately involved= 3;
Very involved= 4;
Extremely involved= 5.

81) How do you feel about the current involvement of your mother (or stepmother, female guardian) in your high school education?

I would like much more= 1;
I would like more= 2;
About right= 3;
I would like less= 4;
I would like much less= 5.

82) How do you feel about the current involvement of your father (or stepfather, male guardian) in your high school education?

I would like much more= 1;
I would like more= 2;
About right= 3;
I would like less= 4;
I would like much less= 5.

83) How important is it for you to have/keep a good family name and reputation?

Not at all important= 1;
Somewhat important= 2;
Important= 3;
Very important= 4;
Extremely important= 5.

HOW IMPORTANT IS IT TO YOUR PARENTS (STEPPARENTS, GUARDIANS) THAT YOU WORK HARD AT YOUR SCHOOLWORK IN ANY OF THE FOLLOWING SUBJECTS:

I have never taken this subject= 1;
Not at all important= 2;
Somewhat important= 3; Important= 4;
Extremely important=5.

84) Mathematics? 1 2 3 4 5

85) English? 1 2 3 4 5

86) Social Studies? (or History) 1 2 3 4 5

87) Science? 1 2 3 4 5

88) Vocational/Business? (or Shop & Home Economics) 1 2 3 4 5

WHEN YOU GET A <u>GOOD</u> GRADE, WHICH OF THE FOLLOWING REACTIONS DO YOU GET FROM YOUR PARENTS (OR STEPPARENTS, GUARDIANS)?

Almost never= 1; Rarely= 2; Sometimes= 3;
Usually= 4; Almost always= 5.

89) They praise me. 1 2 3 4 5

90) They give me a gift. 1 2 3 4 5

91) They give me an increased allowance. 1 2 3 4 5

92) They give me more freedom to make my own decisions. 1 2 3 4 5

93) They give me permission to stay out later at night. 1 2 3 4 5

94) They give me fewer restrictions. 1 2 3 4 5

95) They tell me I should do better. 1 2 3 4 5

96) They say my other grades should be as good. 1 2 3 4 5

97) They consider it natural and do nothing special. 1 2 3 4

98) They don't know about it. 1 2 3 4 5

99) They don't care. 1 2 3 4 5

WHEN YOU GET A POOR GRADE, WHICH OF THE FOLLOWING REACTIONS DO YOU GET FROM YOUR PARENTS (OR STEPPARENTS, GUARDIANS) ?

Almost never= 1; Rarely= 2; Sometimes= 3;
Usually= 4; Almost always= 5.

100) They get upset with me. 1 2 3 4 5

101) They reduce my allowance. 1 2 3 4 5

102) They take away my freedom to make my own decisions. 1 2 3 4 5

103) They say that I can't stay as late at night. 1 2 3 4 5

104) I have more restrictions. 1 2 3 4 5

105) I am grounded. 1 2 3 4 5

106) I lose the use of my car. 1 2 3 4 5 (I have no car= 6).

107) They make my life miserable. 1 2 3 4 5

108) They make me feel guilty. 1 2 3 4 5

109) They encourage me to try harder. 1 2 3 4 5

110) They offer to help me. 1 2 3 4 5

111) They talk to my teacher, principal, or counselor about it. 1 2 3 4 5

112) They don't know about it. 1 2 3 4 5

113) They don't care. 1 2 3 4 5

For questions 114-117, choose from the following answers:

Almost never= 1;
2 to 3 times a year= 2;
2 to 3 times a month= 3;
2 to 3 times a week= 4;
Everyday= 5.

114) How often do your mother (or stepmother, female guardian) or father (or stepfather, male guardian) help you with your homework? 1 2 3 4 5

115) How often do your older brothers and sisters help you with your homework? 1 2 3 4 5 No older brother/sister= 6.

116) How often do your friends help you with your homework?
1 2 3 4 5

117) How often do your mother (or stepmother, female guardian) or father (or stepfather, male guardian) check whether you have finished your homework? 1 2 3 4 5

For questions 118-127, choose among these answers:

Never= 1; Rarely= 2; Sometimes= 3; Often= 4; Very often= 5.

118) Do your parents tell you that their ideas are correct and that you should not question them? 1 2 3 4 5

119) Do your parents say that you should always look at both sides of the issue? 1 2 3 4 5

120) Do your parents answer your arguments by saying something like " You will know better when you grow up" ? 1 2 3 4 5

121) Do your parents say that you should give in on arguments rather than make people angry? 1 2 3 4 5

122) Do your parents admit that you know more about some things rather than adults do? 1 2 3 4 5

123) Do your parents talk at home about things like politics or religion, where one takes a different side from others?
1 2 3 4 5

HOW OFTEN DO YOUR PARENTS EMPHASIZE THE FOLLOWING...

124) that it is important to get your ideas across even if others don't like it. 1 2 3 4 5

125) that every member of the family should have some say in family decisions. 1 2 3 4 5

126) that you should not argue with adults. 1 2 3 4 5

127) that the best way to stay out of trouble is to keep away from it. 1 2 3 4 5

THANK YOU FOR YOUR COOPERATION!

PLEASE CHECK WHETHER YOU HAVE ANSWERED ALL THE QUESTIONS.

Appendix C

THE SCHOOL AND FAMILY QUESTIONNAIRE FOR THE SAN FRANCISCO SAMPLE

There are two questionnaires I'll ask you to answer. The first one is the "School and Family Questionnaire" (SFQ) while the second one is the "Questionnaire for Children and Youth" (CRPBI-30). The SFQ contains items about your school work such as time and efforts you spend studying, interest in various subjects, grades, what you think causes your doing well or poorly in school, etc. as well as your parents' involvement with your school work. The CRPBI-30 has questions about your relationship with your parents. Specifically, these are items on how you think your parents bring you up. Please circle the appropriate responses right after each question.

I asked your parents to let you join this study. But if you don't feel like joining, you are free to say no. Also, if you don't want to answer some of the questions, you are free not to answer; although I have worded the questions very carefully and would appreciate getting all responses from you. If at some point, you don't feel like finishing the questionnaires, you may do so. But again, I would like your utmost cooperation. I hope that you will enjoy this experience. Thank you very much for your cooperation.

Lilia P. Salazar

THE SCHOOL AND FAMILY QUESTIONNAIRE

BACKGROUND INFORMATION

1. What is your date of birth?
   Month_____ Day_____ Year_____

2. What is your sex?
   Male_____ Female_____

3. How old are you?
   _____Years _____Months

4. Where do you go to school?

5. Who is your Homeroom teacher?

6. What grade are you in?
   7 8 9 10 11 12

7. When you were a child what were the first languages spoken at home?

   English= 1
   Tagalog= 2
   Ilokano= 3
   Ilonggo/Cebuano= 4
   Another Filipino dialect= 5

8. Which of the following people now live in your household? (Circle "yes" or "no" for each line).

		Present in my household	
a.	Father	YES	NO
b.	Mother	YES	NO
c.	Stepfather	YES	NO
d.	Stepmother	YES	NO
e.	Other male guardian	YES	NO
f.	Other female guardian	YES	NO
g.	Grandfather(s)	YES	NO
h.	Grandmother(s)	YES	NO
i.	Other adult male relatives (not parent or guardian)	YES	NO
j.	Other adult female relatives not parent or guardian)	YES	NO
k.	Other adult males who are not relatives	YES	NO
l.	Other adult females who are not relatives	YES	NO

9. How many of these people are not living in your household? (Circle one number for each line).

a. Brothers.....0...1...2...3...4 or more
b. Sisters.....0...1...2...3...4 or more
c. Stepbrothers.....0...1...2...3...4 or more
d. Stepsisters.....0...1...2...3...4 or more
e. Other male children....0...1...2...3...4 or more
f. Other female children..0...1...2...3...4 or more

10. Please give the age of each of the following persons; (If you're not sure, give your best guess).

a. Your mother....._____years old
b. Your father....._____years old
c. Your stepmother(or female guardian)_____years old
d. Your stepfather(or male guardian).._____years old

11. Please tell me about your living arrangements with your natural parents by checking which items below apply to you:

a. My natural parents are not divorced or separated, both are in the Bay Area, and I live with both of them.
.....YES.....NO

b. My natural parents are not divorced or separated but one is in the Philippines and I live with just one of them in the Bay Area.....YES.....NO

c. My natural parents are not divorced or separated but both of them are in the Philippines and I live with adult relatives or guardians in the Bay Area.....YES.....NO

d. My natural parents are divorced or separated, both are in the Bay Area, and I live with just one of them
.....YES.....NO

e. My natural parents are divorced or separated, one is in the Philippines, and I live with just one of them.....
.....YES.....NO

For those whose parents are divorced or separated, do you live with a stepfather or stepmother?.....YES.....NO

12. How long have you lived in California?....._____years

13. How long have you lived in the United States?_____years

14. Where were you and each of your parents born? If applicable, answer also for your stepparents (or guardians). Circle one number in each line.

	Philippines	California	Another U.S. State	Other Country (Specify)
You	1	2	3	4
Your father	1	2	3	4
Your mother	1	2	3	4
Your stepfather	1	2	3	4
Your stepmother	1	2	3	4

15. What was the highest level of education completed by each of your parents? If applicable, answer also for your stepparents (or guardians). (Circle one number in each column).

	Your Mother	Your Father	Your Step-Mother	Your Step-Father
Not a high school graduate	1	1	1	1
High school graduate	2	2	2	2
Vocational or trade school	3	3	3	3
Some college	4	4	4	4
Four year college degree	5	5	5	5
Graduate/professional degree	6	6	6	6
Don't Know	7	7	7	7
Not applicable	8	8	8	8

16. What is your mother's (or female guardian's) job?

17. What is your father's (or male's guardian's) job?

SCHOOL WORK AND ACTIVITIES

18. How many rooms are in your house, NOT including hallways or bathrooms? _____Rooms

19. Do you have a quiet place in your home to study or do your homework? YES_____NO_____

20. Where do you usually study? (Circle all that apply)

At home.....1
At a friend's.....2
At the library.....3
At school.....4
I don't study.....5

21. How would you describe most of the courses that you are taking? (Circle one choice only)

College Prep	1
General	2
Vocational or Business	3
Remedial or Basic Skills	4
Special Education	5
Don't Know	6

22. Which of the following describes your grades so far in high school? (Circle one choice only)

Mostly A's	1
About half A's and half B's	2
Mostly B's	3
About half B's and half C's	4
Mostly C's	5
About half C's and half D's	6
Mostly below D	7
I am not sure	8

23. What feeling do you have about your grades?

A feeling of success (e.g. I feel happy or satisfied about my grades) = 1.

A feeling of failure (e.g. I feel unhappy or dissatisfied about my grades) = 2.

24. How important are the following causes in your feeling of success or failure about your grades?

	Not at all important	Somewhat important	Important	Very important	Extremely important
My ability.	1	2	3	4	5
How hard I tried in my subjects.	1	2	3	4	5
How much I prepared for the assignments	1	2	3	4	5
How difficult the assignments and exams are.	1	2	3	4	5

How difficult the subjects in general are.	1	2	3	4	5
My interest in the subject being tested.	1	2	3	4	5
The teachers' explanation of the material in the subjects	1	2	3	4	5
The conditions at home being suitable for study.	1	2	3	4	5
Luck.	1	2	3	4	5
Fate or destiny.	1	2	3	4	5

25. What grades do you expect to get in the next year?

Higher than my grade last year = 1
Same as my grade last year = 2
Lower than my grade last year = 3

26. How far would you like to go in school? (Check only one)

Quit school as soon as possible = 1
Finish high school = 2
Get some community-college training after high school = 3
Obtain a four-year university degree = 4
Obtain a university degree and then take further training (medical school, law school, graduate school, etc.) = 5

27. How far do you expect to go in school? (Check only one)

Quit school as soon as possible = 1
Finish high school = 2
Get some community-college training after high school = 3
Obtain a three-year or four-year university degree = 4;
Obtain a university degree and then take further training (medical school, law school, graduate school, etc.) = 5

28. How interested are you in the following subjects?

	Never taken this subject	Not at all interested	Somewhat interested	Interested	Extremely interested
Math	1	2	3	4	5
English	1	2	3	4	5
Social Studies	1	2	3	4	5
Science	1	2	3	4	5
Vocational/ Business	1	2	3	4	5
Fine Arts..Music, Drama,etc.	1	2	3	4	5
Foreign Language	1	2	3	4	5
PE	1	2	3	4	5

29. How hard do you try to get good grades in each of these classes? (Circle only one choice for each class)

	Extremely hard	Very hard	Moderately hard	Slightly hard	Not at all hard	Never taken this subject
Math	1	2	3	4	5	6
English	1	2	3	4	5	6
Social Studies	1	2	3	4	5	6
Science	1	2	3	4	5	6
Vocational/ Business	1	2	3	4	5	6
Fine Arts.. Music, Drama, etc.	1	2	3	4	5	6
Foreign Language	1	2	3	4	5	6
PE	1	2	3	4	5	6

30. Approximately what is the total amount of time you currently spend on homework each week, including reading assignments? (Circle one choice only)

No homework is ever assigned	1
I have homework, but I don't do it	2
Less than 1 hour a week	3
Between 1 and 3 hours a week	4
Between 3 and 5 hours a week	5
Between 5 and 10 hours a week	6
Between 10 and 15 hours a week	7
More than 15 hours a week	8

31. For each class, how much time do you you currently put into homework each week, including reading your assignments? (Circle one choice for each class you are currently taking).

	None	About 15-30 minutes a week.	About 1 hour a week.	About 2 to 3 hours week.	About 4 or more a hours a week.
Math	1	2	3	4	5
English	1	2	3	4	5
Social Studies	1	2	3	4	5
Science	1	2	3	4	5
Vocational/ Business	1	2	3	4	5
Fine Arts .. Music,Drama, etc.	1	2	3	4	5
Foreign Language	1	2	3	4	5
PE	1	2	3	4	

32. How often do you avoid each of these classes by getting an <u>excused</u> absence? (Circle only one choice for each class)

	Never taken this subject	Once or twice a week	A few times a month	A few times a year	I never avoid classes
Math	1	2	3	4	5
English	1	2	3	4	5
Social Studies	1	2	3	4	5

Science	1	2	3	4	5
Vocational/ Business	1	2	3	4	5
Fine Arts .. Music,Drama, etc.	1	2	3	4	5
Foreign Language	1	2	3	4	5
PE	1	2	3	4	5

33. How important is your school performance to your family?

1 = Not at all important
2 = Slightly important
3 = Moderately important
4 = Very important
5 = Extremely important

34. To what extent do you think your family name will be ruined if you were suspended from or dropped out of school?

1 = Not at all
2 = A little bit
3 = Very Much

35. How important is it for you to have/keep a good family name and reputation?

Not at all important = 1
Somewhat important = 2
Important = 3
Very important = 4
Extremely important = 5

36. How much are your parents (stepparents or guardians) involved in your high school education? (Circle only one choice for each line).

	Not at all Involved	Slightly Involved	Mode-rately Involved	Very Involved	Extremely Involved
Mother.....	1	2	3	4	5
Stepmother or female guardian.....	1	2	3	4	5
Father.....	1	2	3	4	5

Stepfather or male guardian.....1	2	3	4	5

37. How important is it to your parents (stepparents or guardians) that you work hard at your schoolwork? (Circle one choice for each class)

	Not at all Important	Slightly Important	Moderately Important	Very Impor-tant	Extremely Impor-tant	Never taken this subject
Math.....	1	2	3	4	5	6
English.....	1	2	3	4	5	6
Social Studies.....	1	2	3	4	5	6
Science.....	1	2	3	4	5	6
Vocational/ Business....	1	2	3	4	5	6
Fine Arts Music,Drama..	1	2	3	4	5	6
Foreign Language.....	1	2	3	4	5	6
PE.....	1	2	3	4	5	6

38. When you get a GOOD GRADE, which of the following reactions do you sometimes get from your parents (stepparents, guardians)? (Circle one number for each line).

	Almost never	Rarely	Sometimes	Usually	Almost always
They praise me.	1	2	3	4	5
They give me a gift.	1	2	3	4	5
They give me an increased allowance.	1	2	3	4	5
They give me more freedom to make my own decisions.	1	2	3	4	5
They give me permission to stay out later at night.	1	2	3	4	5
They give me fewer restrictions.	1	2	3	4	5

They tell me I should do better.	1	2	3	4	5
They say my other grades should be as good.	1	2	3	4	5
They consider it natural and do nothing special.	1	2	3	4	5
They don't know about it.	1	2	3	4	5
They don't care.	1	2	3	4	5

39. When you get a POOR GRADE, which of the following reactions do you sometimes get from your parents (stepparents, guardians)? (Circle one number for each line)

	Almost never	Rarely	Sometimes	Usually	Almost always
They get upset with me.	1	2	3	4	5
They reduce my allowance.	1	2	3	4	5
They take away my freedom to make my own decisions.	1	2	3	4	5
They say I can't stay out as late at night.	1	2	3	4	5
I have more restrictions.	1	2	3	4	5
I am grounded.	1	2	3	4	5
I lose the use of the car.	1	2	3	4	5
They make my life miserable.	1	2	3	4	5
They make me feel guilty.	1	2	3	4	5

They encourage me to try harder.	1	2	3	4	5
They offer to help me.	1	2	3	4	5
They talk to my teacher, principal, or counsellor about it.	1	2	3	4	5
They don't know about it.	1	2	3	4	5
They don't care.	1	2	3	4	5

40. How often do each of the following people help you with your homework? (Circle one number for each line).

	Not in my family	Every-day	2-3 times per week	2-3 times per month	2-3 times per year	Never
Mother(or female guardian)	1	2	3	4	5	6
Father(or male guardian)	1	2	3	4	5	6
Other adult male in my home	1	2	3	4	5	6
Other adult female in my home	1	2	3	4	5	6
Brothers or sisters	1	2	3	4	5	6
Friends	1	2	3	4	5	6

41. These are some of the things that parents (stepparents and guardians) say to their children. Please think about your family conversations and indicate for each of the following items how frequently you hear similar things: (Circle one number for each line).

DO THEY...	Never	Rarely	Some-times	Often	Very Often
Tell you that their ideas are correct and that you should not question them.....	1	2	3	4	5
Say that you should always look at both sides of the issue...	1	2	3	4	5
Answer your arguments by saying something like "You'll know better when you grow up".....	1	2	3	4	5
Say that you should give in on arguments rather than make people angry.....	1	2	3	4	5
Admit that you know more about some things than adults do.....	1	2	3	4	5
Talk at home about things like politics or religion, where one takes a different side from others.....	1	2	3	4	5

42. Now, please indicate how much your parents (stepparents or guardians, emphasize the following things: (Circle one number for each line)

DO THEY EMPHASIZE...	Not at all	Not too much	Somewhat	Pretty much	Very much
That it is important to get your ideas across even if others don't like it.....	1	2	3	4	5
That every member of your family should have some say in family decisions.....	1	2	3	4	5
That you should not argue with adults.....	1	2	3	4	5
That the best way to stay out of trouble is to keep away from it.	1	2	3	4	5

THANK YOU FOR YOUR PARTICIPATION! PLEASE CHECK

WHETHER YOU HAVE ANSWERED ALL THE QUESTIONS.

Appendix D

LETTER TO PARENTS IN THE WINNIPEG SAMPLE

Dear Parents:

I am a Filipino Ph.D. student in Psychology at the University of Manitoba. I am currently doing my dissertation and my interest lies on families and teenagers. The Filipino population in Winnipeg is quite large, especially the youth group, but very few studies have been conducted on them. After talking to some people in the community such as parents, teachers, and the teenagers themselves, I found out that a major area of concern to everybody is the achievement of high school students in the school. More specifically, it appears that many of our youth could be helped to perform well in school if factors involved with their studying can be identified.

Thus, I thought of doing my research on this area. I will look at some factors involved in the Filipino high school students' performance in the school. These include things in school and at home. One major area I will examine is their relationship with their parents and how this affects their studying. Other questions I will ask the students concern their beliefs and attitudes toward school. Examples include their interest in some subjects, the time and efforts they spend in studying, their grades, what they think cause their good or bad grades, etc.

Your child is free not to answer any questions, although I have worded the questions very carefully and would appreciate getting all the information I could. All the information to be gathered will be anonymous and confidential. If you have any further questions about the study, please phone me at 453-6835 (home).

I would like to ask your permission to allow your teenaged children to participate in this study. They will answer two questionnaires on the topics I cited earlier which will take them about 45 minutes.

This study has been approved by the Ethincs Committee of the Psychology Department at the University of Manitoba and is supervised by my adviser, Dr. S. Schludermann. There is no penalty for either you or your child for refusing to participate in this study. If you decide not to allow your child to participate in this study, please give me back the form below with your signature. Otherwise, I would assume that you allow your child to participate in this research. Thank you for your cooperation.

Truly yours,

Lilia Salazar

PERMISSION FORM

A Study on the Filipino Students' School Performance

Name of Child:_____

_____ I do not consent to let my child participate.

Parent's Name and Signature:_____

Telephone Number: _____

Appendix E

LETTER TO PARENTS IN THE SAN FRANCISCO SAMPLE

Dear Parents:

I am a Filipino Ph.D. student in Psychology at the University of Manitoba, Winnipeg, Manitoba, Canada. I recently immigrated to the San Francisco Bay Area while finishing my dissertation. My interest lies on families and teenagers.

The Filipino population in the San Francisco Bay Area is quite large, especially the youth group, but very few studies have been conducted on them. After talking to some people in the community such as parents, teachers, and the teenagers themselves, I found out that a major area of concern to everybody is the achievement of high school students in the school. More specifically, it appears that many of our youth could be helped to perform well in school if factors involved with their studying can be identified.

Thus, I thought of doing my research on this area. I will look at some factors involved in the Filipino high school students' performance in the school. These include things in school and at home. One major area I will examine is their relationship with their parents and how this affects their studying. Other questions I will ask the students concern their beliefs and attitudes toward school. Examples include their interest in some subjects, the time and efforts they spend in studying, their grades, what they think cause their grades, etc.

Your child is free not to answer any questions although, I have worded the questions very carefully and would appreciate getting all the information I could. All the information to be gathered will be anonymous and confidential. If you have any further questions about the study, please phone me at (415) 778-0364 (home).

I would like to ask your permission about two things: (1) to allow your teenaged child to participate in this study; and, (2) to allow me to look at your child's school records/ grades. Your child will answer two questionnaires on the topics I cited earlier which will take them about 45 minutes. The testing will be held in your child's school in a room arranged by the principal or the Filipino Club adviser and your child will be excused from his/her class to participate in this study.

This study has been approved by the Ethics Committee of the Psychology Department at the University of Manitoba and is supervised by my adviser, Dr. S. Schludermann. There is no penalty for either you or your child for refusing to participate in this study. If you decide not to allow your child to participate in this study, please give me back the form below with your signature. You may send it through your child who will give it to his/her teacher who gave him/her this letter. Otherwise, I would assume that you allow your child to participate in this research. Thank you for your cooperation.

Truly yours,

Lilia Salazar

PERMISSION FORM

A Study on the Filipino Students' School Performance

Name of Child:_____

_____ I do not consent to let my child participate.

Parent's Name and Signature:_____

Telephone Number: _____

Appendix F

FACTOR ANALYSIS OF THE CRPBI-30 ITEMS

This appendix will discuss the details of the factor analysis done on the items of the CRPBI-30 used for the Parenting variable of the present study. Factor analyses were conducted separately with the Mother's and Father's forms of the CRPBI-30. The samples used included the San Francisco sample and the combined San Francisco and Winnipeg sample. The results consistently showed three factors for both maternal and paternal dimensions. In addition, the coefficients of congruence, as cited in the text of the study, presented a strong agreement between the obtained factors in this study and those of the original CRPBI-30. Thus, as mentioned earlier, the results of this factor analysis replicated the items of the CRPBI-30 and therefore validated its use for the present study.

1. Mother's Form of the CRPBI-30

Using the San Francisco sample only, three factors were identified on the Mother's Form. These factors are Maternal Acceptance, Maternal Control, and Maternal Lax Control. The following is the list of the items consisting these factors and their corresponding factor loadings:

Factor 1 (Acceptance)	Factor 2 (Control)	Factor 3 (Lax Control)
Item 13 = .75	Item 14 = .65	Item 24 = .76
Item 22 = .74	Item 11 = .63	Item 27 = .75
Item 16 = .72	Item 17 = .62	Item 30 = .68
Item 7 = .70	Item 9 = .59	Item 21 = .63
Item 19 = .69	Item 6 = .59	Item 15 = .45
Item 10 = .66	Item 12 = .57	Item 18 = .31
Item 28 = .65	Item 26 = .53	
Item 1 = .64	Item 8 = .53	
Item 4 = .62	Item 3 = .53	
Item 25 = .56	Item 23 = .49	
	Item 29 = .45	
	Item 2 = .43	
	Item 5 = .41	
	Item 20 = .41	

The eigenvalues of the three factors are: Factor 1 = 5.80, Factor 2 = 3.85, and Factor 3 = 2.36. Based on the criterion of eigenvalue being equal to or greater than 1.00, the three factors found in the San Francisco sample meet this criterion. Furthermore, the proportion of variance accounted for by each factor has a total cumulative value of 40%. Factor 1 accounts for 19% of the variance, Factor 2 accounts for 13%, and Factor 3 accounts for 8%.

When both the San Francisco and Winnipeg samples were combined, a factor analysis of the CRPBI-30 items revealed three factors as well. The only difference in terms of the items is that of Item 15 (i.e., My mother is easy with me). In the San Francisco sample only, Item 15 is part of Factor 3 or Lax Control, whereas in the combined San Francisco and Winnipeg samples, this item falls under Factor 1 or Acceptance.

The factor loadings of the items consisting the three factors in the combined San Francisco and Winnipeg samples are listed below:

Factor 1 (Acceptance)	Factor 2 (Control)	Factor 3 (Lax Control)
Item 13 = .75	Item 14 = .66	Item 24 = .74
Item 22 = .75	Item 17 = .63	Item 27 = .72
Item 16 = .73	Item 11 = .61	Item 30 = .64
Item 7 = .71	Item 9 = .59	Item 21 = .62
Item 19 = .68	Item 12.= .59	Item 18 = .41
Item 10 = .68	Item 3 = .56	
Item 1 = .66	Item 6 = .55	
Item 28 = .66	Item 8 = .54	
Item 4 = .65	Item 23 = .51	
Item 25 = .51	Item 25 = .48	
Item 15 = .43	Item 5 = .45	
	Item 20 = .43	
	Item 29 = .43	
	Item 2 = .42	

The eigenvalues of these factors are: Factor 1 = 5.56, Factor 2 = 4.01, and factor 3 = 2.46. Again, these factors meet the eigenvalue criterion of being equal to or greater than 1.00. Factor 1 accounts for 19% of the total variance. Factor 2 accounts for 13% of the total variance and Factor 3 accounts for 8% of the total variance. The cumulative proportion of variance accounted for by the three factors is 40%.

1.1. Factor 1 or Maternal Acceptance

Factor analysis in the San Francisco sample revealed 10 items consisting Factor 1 or Maternal Acceptance. However, one item was added when the San Francisco and Winnipeg samples were combined, i.e., Item 15: "My mother is easy with me." These 11 items are exactly the same as those of the items in the CRPBI-30

by Schludermann & Schludermann (1988). These items are listed below together with their factor loadings:

(1) Item 13 (.75): "My mother cheers me up when I'm sad."
(2) Item 22 (.75): "My mother believes in showing her love for me."
(3) Item 16 (.73): "My mother gives me a lot of care and attention."
(4) Item 7 (.71): "My mother makes me feel better when I am upset."
(5) Item 19 (.68): "My mother makes me feel like I'm the most important person in her life."
(6) Item 10 (.68): "My mother enjoys doing things with me."
(7) Item 28 (.66): "My mother is easy to talk to."
(8) Item 1 (.66): "My mother makes me feel better after talking over my worries with her."
(9) Item 4 (.65): "My mother smiles at me very often."
(10) Item 25 (.51): "My mother often praises me."
(11) Item 15 (.43): "My mother is easy with me."

When the coefficient of congruence between Maternal Acceptance Factor (based on the combined San Francisco and Winnipeg samples) and the original CRPBI-30 Maternal Acceptance factor was computed, a phi coefficient of +1.00 was obtained.

2.2. Factor 2 or Maternal Control

In CRPBI-30, Control dimension was divided into two kinds: Psychological and Firm Control. Psychological Control refers to the use of psychological means of control, low punitiveness, not using physical punishment, and referring to the parent's emotional reactions to the child's misbehavior. Firm Control, on the other hand, includes many rules and restrictions, strict enforcement of demands, punitiveness, ignoring, irritability and the use of fear to control.

In the present study, both the Psychological Control and

Firm Control items showed under the Control Factor. However, most of the items in Factor 2 fall under Psychological Control. Thus, it can be inferred that Factor 2 is the equivalent of the Psychological Control factor of CRPBI-30. Moreover, the coefficient of congruence between Maternal Psychological Control of the CRPBI-30 and the present study's Maternal Control is equal to +.95. Although there is a congruence as well between the original CRPBI-30 Maternal Control factor and the present study's Maternal Firm Control, it is only .58.

Therefore, the term Control will be used to label Factor 2 to differentiate it from Factor 3 which is Lax Control. there are 14 items comprising Factor 2. This set of itmes was obtained both from the San Francisco sample alone and the combined San Francisco and Winnipeg samples. Below is a list of these items together with their factor loadings based on the combined San Francisco and Winnipeg samples:

(1) Item 14 (.65): "My mother wants to control whatever I do."
(2) Item 11 (.63): "My mother would like to be able to tell me what to do all the time."
(3) Item 17 (.62): "My mother is always trying to change me."
(4) Item 9 (.59): "My mother is very strict with me."
(5) Item 6 (.59): "My mother insists that I must do exactly as I am told."
(6) Item 12 (.57): "My mother gives hard punishment."
(7) Item 26 (.53): "My mother will avoid looking at me when I have disappointed her."
(8) Item 8 (.53): "My mother is always telling me how I should behave."
(9) Item 3 (.52): "My mother believes in having a lot of rules and sticking with them."
(10) Item 23 (.49): "My mother is less friendly with me when I do not see things her way."
(11) Item 29 (.45): "My mother, if I have hurt her feelings, stops talking to me until

I please her again."

(12) Item 2 (.43): "My mother tells me of all the things she had done for me."

(13) Item 5 (.41): "My mother says, if I really cared for her, I would not do things that cause her to worry."

(14) Item 20 (.41): "My mother only keeps rules when it suits her."

1.3. Factor 3 or Maternal Lax Control

The Maternal Lax Control factor of the present study is equivalent to the CRPBI-30's Firm Control dimension. However, the difference lies in the direction of the Control. That is, in Firm Control, mothers do not allow their children to do certain things, whereas with Lax Control, they are permissive with their children when it comes to doing some things. For instance, Item 24 states that "my mother lets me go any place without asking." With mother's Firm Control, she would not let the child go any place s/he wants.

There are five items that load highly on Factor 3 or Maternal Lax Control. In the San Francisco sample alone, Item 15 is part of Maternal Control, not Lax Control (i.e., "My mother is easy with me"). Nevertheless, with the combined San Francisco and Winnipeg samples as the basis for Factor 3, the following items constitute Maternal Lax Control factor:

(1) Item 24 (.74): "My mother lets me go any place I please without asking."

(2) Item 27 (.72): "My mother lets me go out any evening I want."

(3) Item 30 (.64): "My mother lets me do anything I like to do."

(4) Item 21 (.62): "My mother gives me as much freedom as I want."

(5) Item 18 (.41): "My mother lets me off when I do something wrong."

The coefficient of congruence between Lax Control and the CRPBI-30's psychological and Firm Control provides further evidence for what was stated earlier concerning the opposite directions of each kind of Control. That is, the phi coefficient is equal to -.85.

2.1. Father's Form of the CRPBI-30

Three factors were also identified through the factor analysis of the items of the Father's form of the CRPBI-30. These factors are similar to those found in the Mother's form as discussed above. Factor 1 is Paternal Acceptance. Factor 2 is Paternal Control and Factor 3 is Paternal Lax Control.

There were two samples used in deriving these factors - the San Francisco sample only and the combined San Francisco and Winnipeg sample. In both samples, the same three factors were obtained. However, there are minor differences in terms of the items constituting these factors.

More specifically, there are three items that belong to the different factors in each sample. These are Items 32, 35 and 45.

Item 32 ("My father tells me of all the things he had done for me.") and Item 35 ("My father says, if I really cared for him" I would not do things that cause him to worry.") load highly on Factor 1/Paternal Acceptance of the San Francisco sample only but load highly on Factor 2/Paternal Control of the combined San Francisco and Winnipeg sample.

Also, Item 45 ("My father is easy with me.") loads highly on Factor 3/Paternal Lax Control of the San Francisco sample but loads highly on Factor 1/Paternal Acceptance of the combined San Francisco and Winnipeg sample. Otherwise, all the items are similar in the San Francisco only and the combined San Francisco and Winnipeg samples used in the present study.

The following is the list of the items found in the three factors using the San Francisco sample only:

Factor 1 (Acceptance)	Factor 2 (Control)	Factor 3 (Lax Control)
Item 46 = .79	Item 42 = .73	Item 57 = .77
Item 43 = .77	Item 41 = .72	Item 54 = .77
Item 52 = .66	Item 39 = .67	Item 60 = .73
Item 40 = .76	Item 41 = .62	Item 51 = .67
Item 31 = .75	Item 47 = .62	Item 48 = .47
Item 37 = .73	Item 33 = .64	Item 45 = .46
Item 49 = .71	Item 36 = .61	
Item 34 = .71	Item 38 = .61	
Item 58 = .66	Item 58 = .57	
Item 55 = .53	Item 59 = .54	
Item 35 = .46	Item 56 = .50	
Item 32 = .44	Item 50 = .49	

Below are the items found in the three identified factors using the combined San Francisco and Winnipeg sample:

Factor 1 (Acceptance)	Factor 2 (Control)	Factor 3 (Lax Control)
Item 43 = .79	Item 41 = .72	Item 57 = .76
Item 46 = .78	Item 44 = .72	Item 54 = .75
Item 31 = .77	Item 39 = .66	Item 60 = .71
Item 52 = .77	Item 47 = .65	Item 51 = .68
Item 37 = .76	Item 42 = .64	Item 48 = .52
Item 40 = .76	Item 33 = .63	
Item 34 = .74	Item 38 = .62	
Item 49 = .71	Item 36 = .61	
Item 58 = .69	Item 58 = .54	
Item 55 = .54	Item 59 = .54	
Item 45 = .44	Item 56 = .48	
	Item 35 = .45	
	Item 32 = .41	

The eigenvalue criterion of being equal to or greater than +1.00 was satisfied in the present study. The eigenvalues of the three factors based on the San Francisco sample only are: Factor 1 = 6.57, Factor 2 = 4.92, Factor 3 = 2.52. Based on the combined San Francisco and Winnipeg samples, the eigenvalues are: Factor 1 = 6.53, Factor 2 = 4.98, Factor 3 = 2.66.

The proportion of variance accounted for by each of the factors is also substantial. In the San Francisco only sample, these proportions are as follows: Factor 1 = 22%, Factor 2 = 16%, Factor 3 = 9%. The figures for the combined San Francisco and Winnipeg sample do not differ much from these: Factor 1 = 22%, Factor 2 = 17%, and Factor 3 = 9%. The cumulative proportion of the variance accounted for by all three factors is 48%.

2.1. Factor 1 or Paternal Acceptance

CRPBI-30 has 10 items comprising its Paternal Acceptance factor. The exact items are found when factor analysis was done with the San Francisco sample. However, an extra item was found to load highly on Factor 1/Acceptance in the combined San Francisco and Winnipeg sample. This is Item 35: "My father is easy with me". The coefficient of congruence of Factor 1/ Paternal Acceptance between the original CRPBI-30 and the combined San Francisco and Winnipeg sample is +.98.

The items in Factor 1/Paternal Acceptance using the San Francisco sample total 11 and are enumerated below together with

their factor loadings:

(1) Item 43 (.79): "My "father cheers me up when I'm sad."
(2) Item 46 (.78): "My father gives me a lot of care and attention."
(3) Item 31 (.77): "My father makes me feel better after talking over my worries with him."
(4) Item 52 (.77): "My father believes in showing his love for me."
(5) Item 37 (.76): "My father says, if I really cared for him, I would not do things that would cause him to worry."
(6) Item 40 (.76): "My father enjoys doing things with me."
(7) Item 34 (.74): "My father smiles at me very often."
(8) Item 49 (.71): "My father makes me feel like the most important person in his life."
(9) Item 58 (.69): "My father is easy to talk to."
(10) Item 55 (.54): "My father often praises me."
(11) Item 55 (.44): "My father is easy with me."

Furthermore, a coefficient of congruence of +.98 was obtained between the Paternal Acceptance Factor based on the combined San Francisco and Winnipeg sample and the original CRPBI-30 Paternal Acceptance factor.

2.2. Factor 2 or Paternal Control

Factor 2 is similar to the Mother's CRPBI-30 Factor 2 where Psychological and Firm Control items were mixed. Thus, a general Control factor is formulated. Again, it appears to resemble the Psychological Control factor of the CRPBI-30 rather than the Firm Control factor. There are two reasons for labeling Factor 2 as Paternal Control and Factor 3 as Paternal Lax Control. Firstly, there are more items in the Psychological Control factor that are originally classified in the CRPBI-30 as belonging to Psychological Control. Secondly, Paternal Firm Control has a

higher coefficient of congruence with the CRPBI-30's Psychological Control factor (i.e., phi = +.92) than with the CRPBI-30's Firm Control factor (i.e., phi = +.52).

Factor 2 or Paternal Control has 12 items according to the factor analysis of the San Francisco sample. Using the combined San Francisco and Winnipeg sample, two items were added to the Paternal Control factor. These are: Item 32 ("My father tells me of all the things he had done for me.") and Item 35 ("My father says, if I really cared for him, I would not do things tht cause him to worry"). Below is a list of the 14 items consisting Factor 2/Paternal Control based on the combined San Francisco and Winnipeg sample. The factor loadings of the items are also indicated.

(1)	Item 41 (.72):	"My father would like to be able to tell me what to do all the time."
(2)	Item 44 (.72):	"My father wants to control whatever I do."
(3)	Item 39 (.66):	"My father is very strict with me."
(4)	Item 47 (.65):	"My father is always trying to change me."
(5)	Item 42 (.64):	"My father gives hard punishment."
(6)	Item 33 (.63):	"My father believes in having a lot of rules and sticking with them."
(7)	Item 38 (.62):	"My father is always telling me how I should behave."
(8)	Item 36 (.62):	"My father insists that I must do exactly as I am told."
(9)	Item 50 (.55):	"My father only keeps rules when it suits him."
(10)	Item 53 (.54):	"My father is less friendly with me when I do not see things his way."
(11)	Item 59 (.54):	"My father, if I have hurt her feelings, stops talking to me until I please him again."
(12)	Item 56 (.48):	"My father will avoid looking at me when I have disappointed him."
(13)	Item 35 (.45):	"My father says, if I really cared for her, I would not do things that cause him to worry."

(14) Item 32 (.41): "My father tells me of all the things he had done for me."

2.3. Paternal Lax Control

Factor 3 of the Father's Form in the CRPBI-30 is labeled "Firm Control". The same factor as in the Mother's Form was identified in the Father's Form for Factor 3 or Lax Control. Again, the items consisting Factor 3 resemble the items of CRPBI-30's Firm Control except that the direction of Lax Control is positive rather than negative. In other words, with Paternal Lax Control, fathers are perceived by the adolescents to allow them to do certain things.

A high coefficient of congruence of -.82 was obtained for this Factor 3 when a comparison was made between the original CRPBI-30 Firm Control and the combined San Francisco and Winnipeg sample. However, the direction of congruence as noted earlier is negative, not positive.

Five items were identified to comprise Factor 3 or Paternal Lax Control using the combined San Francisco and Winnipeg sample. These items and their factor loadings are enumerated below:

(1) Item 57 (.76): "My father lets me go out any evening I want."
(2) Item 54 (.75): "My father lets me go any place I please without asking."
(3) Item 60 (.71): "My father lets me do everything I want to do."
(4) Item 51 (.68): "My father gives me as much freedom as I want."
(5) Item 48 (.52): "My father lets me off when I do something wrong."

1.3. Summary on the Factor Analysis of the CRPBI-30 Items

Three factors were identified through factor analysis for both Mother's and Father's Forms of the CRPBI-30. These were consistently demonstrated in the two samples employed in the present study: the San Francisco sample and the combined San Francisco and Winnipeg sample. Factor 1 is Acceptance which resembles the CRPBI-30 Acceptance factor. Factor 2 is Control and this corresponds to the Psychological Control factor of the CRPBI-30. Factor 3 is Lax Control; although the items were negative in direction, this is also similar to the Firm Control factor in the CRPBI-30.