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Determinants of self-efficacy beliefs among inner-city youth: A study of efficacy development in community context

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DETERMINANTS OF SELF-EFFICACY BELIEFS AMONG INNER-CITY YOUTH: A STUDY OF EFFICACY DEVELOPMENT IN COMMUNITY CONTEXT

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ABSTRACT

This study investigates the behavioral and social determinants of self-efficacy beliefs among Hispanic youth living in inner-city Los Angeles. Specifically, three proximal predictors (previous performance; vicarious experience; social persuasion), based on Bandura's (1982) theory of efficacy development, and two distal predictors (neighborhood resources; neighborhood safety) were hypothesized to influence self-efficacy beliefs regarding future educational and occupational attainment. Additionally, neighborhood resources and neighborhood safety were hypothesized to influence participation in extra-curricular activities, an indicator for previous performance.

Results showed that self-efficacy beliefs about educational and occupational attainment were most strongly influenced by social persuasion. Specifically, higher perceived expectations of parents and peers were related to higher levels of efficacy. Previous academic performance, when indicated by most recent reading score, significantly predicted educational efficacy but not occupational efficacy.

Greater neighborhood resources and neighborhood danger were found to be associated with increased participation in academic, social, and physical activities among inner-city youth.

These findings point to the importance of a social environment that provides inner-city youth with positive messages and opportunities for success. Children who receive more positive feedback about their future and who experience greater degrees of previous success are more likely to develop and maintain high self-efficacy beliefs. Neighborhood factors appear to influence participation in extra-curricular activities, but the low amount of variance accounted for in participation indicates the presence of other influences yet to be elucidated.

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CHAPTER I

INTRODUCTION

Past research has suggested that children living in impoverished, urban environments have difficulty developing an adequate sense of their own effectiveness. Beliefs about personal effectiveness, or self-efficacy beliefs (Bandura, 1979), among impoverished populations have been addressed in various social science disciplines. For example, under the rubric of "culture of poverty," anthropologists have implied that fatalism permeates the cognitive outlook of the poor (Lewis, 1968); social learning theorists (eg. Bandura) have also suggested that harsh and punitive environments undermine the development of healthy self-efficacy beliefs; and recently, sociologists such as Wilson (1990) and Furstenberg (1992) have begun to link poor developmental outcomes, including low self-efficacy, to adverse economic and social conditions in the neighborhood.

Because self-efficacy is related to a host of child outcomes, it merits investigation as an outcome in its own right. For example, self-efficacy is positively related to resiliency in face of chronic stress (Mzarek & Mzarek, 1987; Garmezy, 1981), and negatively to substance abuse (Farrell, Danish, & Howard, 1992), school failure (Weinstein, Soule, Collins, Cone, Mehlhorn, & Simontacchi, 1991), and delinquency (Oyserman & Markus, 1990). Thus, bolstering self-efficacy implies the facilitation of adaptive outcomes and prevention

of the maladaptive. Moreover, as poor and minority children are especially at risk for negative outcomes (Garmezy, 1981; Seidman, 1991), they represent important target populations for the study of self-efficacy development. Whereas poverty was essentially a problem of the elderly thirty years ago, it is now the province of children (Moynihan, 1988), who are the poorest group in the United States population today. Their chances for escaping poverty, and society's chances for alleviating poverty, lie partly in their expectations for the future. Thus, the need to learn about self-efficacy development in impoverished environments is a pressing one for society as well as individuals.

Unfortunately, however, there have been few attempts to relate specific features within impoverished environments to the development of self-efficacy. Instead, research across social science disciplines has traditionally emphasized one aspect of the environment/self-efficacy relationship to the exclusion of the others. For example, anthropologists focus on "culture" without equal attention to individual or societal factors; psychologists are concerned primarily with individual personality characteristics; and sociologists tend to emphasize global, extra-individual constructs without relating them to psychological processes. An adherence to any single perspective seems inadequate since any developmental process occurs in a social and physical context. That context, in

turn, shapes the daily lives of those who reside there (Bernheimer, Gallimore, & Weisner, 1990).

The present study draws from theory and research from multiple disciplines to examine determinants of self-efficacy among a particular population: children residing in urban, inner-city neighborhoods. The study addresses the following questions: With respect to the targeted population, what experiences lead to the development of high or low self-efficacy expectancies? And, how does the social and physical environment affect these influential experiences? In light of these questions, the purpose of the proposed study is to determine the importance of factors that are hypothesized to influence self-efficacy beliefs among children living in poor, urban neighborhoods. The primary focus will be on self-efficacy beliefs in relation to educational and occupational attainment, as these beliefs constitute the major domains of a child's future expectations. Self-efficacy beliefs for future educational and occupational attainment are hypothesized to be influenced by three types of learning experiences: previous performance, vicarious experience, and social messages (Bandura, 1982). These learning experiences are, in turn, presumed to be influenced by the social and economic context in which they occur.

In order to illustrate the rationale for the proposed study, a review of the relevant literature will be presented. First, theories of social learning as applied to self-efficacy

beliefs will be discussed. Specifically, cognitive models of self-efficacy formation are outlined and traced historically, culminating with the model (Bandura, 1982) that is used in the present study. Self-efficacy beliefs refer to one's cognitions about one's ability to effect a particular outcome. Because these beliefs are expectations about whether a certain outcome will be produced, the term "self-efficacy expectations" has been used interchangeably with "self-efficacy beliefs" and also, more generally, with "expectancy beliefs." In the present paper, the term "self-efficacy beliefs" will be used to refer to a generalized expectation about a certain outcome, except when citing other studies in which the authors specifically use a different term.

Second, studies on the "proximal" influences of self-efficacy beliefs for educational and occupational attainment will be reviewed. Proximal influences refer to the elements of the social learning process that directly influence the individual. As such, they may be conceptualized as the intra-individual or behavioral determinants of self-efficacy beliefs. The proximal factors to be discussed include previous performance, vicarious experience, and social persuasion (Bandura, 1982). It will be demonstrated that proximal influences cited in the literature are consistent with Bandura's model of efficacy development, and that the model provides a good "fit" for the extant data.

Finally, "distal" factors hypothesized to influence expectancy beliefs will be discussed. Distal factors refer to the socio-environmental factors that exert their influence through more proximal factors; thus, their effects on self-efficacy are mediated by the proximal, or behavioral, factors.* The distal factors hypothesized to influence self-efficacy development include socioeconomic status and neighborhood conditions and resources. It is proposed that children living in poor neighborhoods are exposed to conditions that undermine the learning experiences necessary for the development of adaptive self-efficacy beliefs, and that this accounts for the differential expectations evidenced between higher and lower class children (Church et al., 1992).

The Development of Self-Efficacy Beliefs

Early research on expectancies was pioneered by the work of Rotter (Rotter, 1954; James & Rotter, 1958; Rotter, et al., 1961), who was initially interested in the question of how one learns new expectancies. In a series of studies, it was found that when causality is perceived as external--that is, based on random forces beyond the individual's personal control--the individual learns less predictably from reinforcement. When causality is perceived as internally controlled, based on one's personal control, expectancies are derived from one's past experience of success and failure.

*The terms "proximal" and "distal" are meant as heuristic devices to describe the nature of the relationship between the proposed determinants and the behavior of interest, and not as descriptors of distance per se.

Locus of control, as defined by the above tendency to attribute causality to either internal or external forces, has been shown to differ among race and socioeconomic groups. Lower class individuals and blacks tend to endorse external sources of causality over the internal (Battle & Rotter, 1963). According to Rotter, blacks and persons of lower SES are likely to perceive that causality stems from random forces outside of their control. However, whereas Rotter conceptualized external forces to be random (such as fate or chance), there exists the possibility that minority groups perceive, accurately or not, more systematic, rather than random, external sources of control such as racial discrimination. In terms of life experience, it is probable that lower socioeconomic and minority groups have encountered more external but systematic barriers to achievement, and thus their endorsement of an external locus of control may indeed reflect past contingencies on their actions. Therefore, variation in perceived locus of causality is based on learning history; the difference between external and internal endorsers may be simply a difference in past experiences.

Differences in learning history are addressed in Bandura's work on self-efficacy. Bandura (1982) has proposed four major sources of information on which an individual's expectations of efficacy in performing a certain behavior are based: 1) prior performance of that behavior; 2) vicarious experience of observing the performances of others; 3) verbal

persuasion and allied types of social influence; 4) physiological cues. For the purposes of this study, only the first three sources will be discussed as the fourth applies only to anxiety producing behaviors that trigger concomitant physiological reactions. According to Bandura, previous performance provides the most influential source of efficacy information because it is based on personal experiences of mastery (Bandura, 1982). However, vicarious experience, such as observing similar others perform successfully, can raise efficacy expectations as well. Although verbal persuasion is deemed to be less influential than the other two sources, it too can contribute to efficacy estimations if the appraisal is within realistic bounds (Bandura, 1982).

The effects of these predictors have been demonstrated in a series of experiments involving the treatment of snake phobics (Bandura & Adams, 1977; Bandura, Adams, & Breyer, 1977; Bandura, Adams, Hardy, & Howells, 1980). In these studies, phobics were provided images of models handling snakes, were told that they can successfully cope with the task, and were eventually given a snake to handle. Results confirm that each of these modes of influence all increase self-perceptions of efficacy. Moreover, the higher the level of perceived self-efficacy, the greater the subsequent performance accomplishments.

Bandura also distinguishes between <u>efficacy expectancy</u> and <u>outcome expectancy</u>, which together comprise self-efficacy

beliefs about a certain outcome. Efficacy expectancy refers to one's judgments about one's ability to perform a certain behavior, and outcome expectancy refers to the belief that the behavior will produce the desired outcome (Bandura, 1978). Thus, while efficacy expectancy reflects the belief that one can perform a certain action, outcome expectancy reflects one's appraisal of the external environment in allowing a certain outcome to occur. In other words, high efficacy expectancy is the belief that "I can perform the behavior," and high outcome expectancy is the belief that "if I perform the behavior, I will get what I want." Therefore, in the case of ghetto residents, low self-efficacy beliefs about occupational attainment may be due to either low efficacy expectancy ("I cannot do the things necessary to get a job"), low outcome expectancy ("I cannot get this job because there are no jobs available"), or both.

Although the distinction between efficacy expectancy and outcome expectancy seems clear, its theoretical and empirical usefulness has been challenged. For instance, Kazdin (1979) has questioned whether the efficacy expectancy concept is superfluous; that is, if one expects a desired outcome to be blocked, one will not act even if judgments about personal ability are high. In other words, strong personal confidence alone is not enough of an impetus for action; an equal confidence in the realization of the desired outcome is necessary as well. Even if the two concepts were not

theoretically confounded, they may be difficult to test empirically as they may have reciprocal influence (Kazdin, 1979).

Thus far, only a handful of studies have attempted to separate the two types of expectancies. For example, Lee (1984) found that efficacy expectancies are more important than outcome expectancies in predicting assertiveness among female college students, while Ollendick and Schmidt (1987) found that outcome expectancies better predicted peer interaction among children between 6 and 12 years of age. Clearly, it appears possible to empirically separate the two constructs, although further investigation is warranted.

Proximal Determinants of Self-Efficacy Beliefs

While the majority of studies based on Bandura's theory has focused on simple units of behavior such as the handling of snakes, some studies have applied the theory to more complex behavior such as self-efficacy for educational and occupational attainment. The studies summarized in this section involve the application of Bandura's framework to academic and occupational attainment among children.

In a study of academic self-efficacy, Keyser and Barling (1981) hypothesized two predictors of efficacy beliefs based on Bandura's model: 1) reading scores, based on Bandura's notion of previous performance attainment, and 2) teacher's efficacy score, based on Bandura's concept of vicarious experience (modeling). Efficacy and outcome expectancy were

measured separately, in that the efficacy measure contained items querying efficacy ("I can pass this year") as well as response-outcome expectancy ("If I don't listen I may fail"). Results showed that modeling significantly predicted efficacy beliefs, while previous performance attainment did not. Thus, these results contradict Bandura's assertion that previous performance is the most influential source of efficacy information. However, it is possible that reading score fails to adequately capture the notion of previous performance; after all, reading score is only a "snapshot" index of one's past achievement. Therefore, in a follow-up study, Keyser and Barling (1981) operationalized previous performance differently--as classroom participation--and found a significant relationship with academic self-efficacy beliefs. They speculated that, unlike reading scores, participation served as a continuous source of information for the formation of expectancy beliefs. However, the authors do not address the fact that reading scores appear to be a better proxy for past successful performance, while participation seems to reflect the qualitatively different dimension of <u>involvement</u>. Thus, this leaves open the question of whether <u>successful</u> performance is necessary, or whether <u>participation</u> itself predicts efficacy. Neither study showed a difference between efficacy and outcome expectancy.

The lack of difference found between efficacy versus outcome expectancy may have resulted from two possible

methodological limitations. First, a lack of variation in the socioeconomic status of the sampled subjects may have been a factor, as a homogeneously high-income sample is less likely to evidence a distinction between efficacy and outcome expectancy because they may encounter fewer external obstacles to achievement. Unfortunately, as the socioeconomic status of the participants were not reported, this explanation remains equivocal. Alternatively, the outcome expectancy construct may have been poorly operationalized. The authors' example of the outcome items, "if I don't listen I may fail," does not include the possibility of failing (outcome) even if one listened (efficacy). A more discerning statement might be "I may fail <u>even if</u> I listen" in order to separate outcome from performance of the requisite behavior, so that respondents can endorse a negative outcome even as they endorse a positive efficacy statement.

The aforementioned study by Keyser and Barling (1981) is the only study of academic self-efficacy explicitly based on Bandura's model of efficacy development. However, other studies of self-efficacy regarding educational and occupational attainment abound, especially in the sociological literature. The following subsections will review these studies according to how well they fit with Bandura's conceptual model. Specifically, studies will be grouped in accordance with Bandura's triad of determinants: previous performance, vicarious experience, and social persuasion.

Previous Performance. In studies on simple units of behavior, previous performance is defined simply as just that--previous performance of the identical behavior. However, in the case of self-efficacy beliefs about educational and occupational attainment, the concept of previous performance is less clear, because it is impossible to have a previous level of educational attainment or a previous level of occupational attainment (if one were a child) as both refer to future outcomes. Therefore it is necessary to broaden Bandura's conceptualization of previous performance to include participation and performance in activities that promote the behaviors of interest, even if the behaviors employed in these activities are not identical to the behavioral outcome of interest.

For example, in a study of status attainment, Hauser (1971) found that school performance and participation in school-related activities predicted academic ambition. Although the behaviors that comprise school performance and participation cannot, by definition, serve as markers of past performance of future educational attainment, they are the closest possible approximation.

The concept of participation has been important in studies of self-esteem and psychological health. Participation in meaningful activities, defined as task- or skill-related experiences, has shown positive benefits for adolescents' health and sense of mastery (Maton, 1990), and

has also been demonstrated as key to the development of psychological empowerment (Zimmerman & Rappaport, 1988; Wandersman, 1979). Psychological empowerment is a multi-dimensional construct consisting of personality, motivational, and cognitive components (Kieffer, 1984; Zimmerman & Rappaport, 1988), of which self-efficacy beliefs are presumed to be a part. Among college students and community residents, participation in community activities and organizations was associated with higher levels of psychological empowerment (Zimmerman & Rappaport). Among urban male African-American adolescents, participation in meaningful activities conferred a buffer against substance use (Zimmerman & Maton, 1992).

In terms of educational expectations, participation in athletic activity was positively related to college plans in high school boys, with the strongest effect demonstrated among those otherwise not disposed toward college (cited in Holland & Andre, 1987). Similarly, girls who participated in both sports and music had higher expectations than non-participants (Snyder & Spreitzer, 1977). The positive relationship between participation in extra-curricular activities and educational expectations is fairly consistent across studies (Holland & Andre, 1987), although the effects of the scope, extent, and quality of participation are relatively unknown.

In sum, studies on school performance and participation in school-related activities suggest that both are important to the development of self-efficacy beliefs regarding future

educational and occupational attainment. Additionally, both appear to be reasonable approximations of "past performance" in the realm of educational and occupational attainment expectancies. The extent to which school performance and participation are different is left to further investigation.

Vicarious Experience. Vicarious experience has been defined as the observation of similar others performing the behavior of interest (Bandura, 1982). Thus, if the target behaviors are expectations for educational and occupational attainment, vicarious experience may be operationalized as parents', or significant others', educational and occupational attainment. In other words, parents (and significant others) serve as role models for their children. Cohen (1987) has demonstrated the effects of parents' modeling and direct encouragement on children's educational and occupational expectations. Both modeling, as measured by parents' attainment, and verbal encouragement significantly predicted expectations; however, modeling was a stronger influence in white-collar than in blue-collar homes, perhaps because positive role models are more limited in lower class families.

It has also been shown that people other than parents influence the educational and occupational expectations of children. In a study of black and white students, Scritchfield and Picou (1982) found that while both groups named family members as important models, blacks named more extended family members. Moreover, blacks identified more

people with whom they had no interaction, such as celebrities, as models. Whites identified more adult friends and acquaintances as both educational and occupational models, while blacks tended to identify teachers as educational models and extended family members as occupational models.

In summary, the importance of parents and significant others as role models for educational and occupational attainment has been demonstrated by previous research. With respect to Bandura's framework for the formation of self-efficacy beliefs, vicarious experience appears adequately represented by the attainments of significant others. That is, children appear to assess the probability of success by observing those close to them, and to apply these assessments to judgments about their own future success.

Social Persuasion. Social persuasion is defined as the verbal communication from others on which an individual bases his or her judgments of self-efficacy (Bandura, 1982). In the case of self-efficacy beliefs about educational and occupational attainment, social persuasion refers to the messages one receives about his or her future achievement. Thus, encouragement from parents and others are important sources of social persuasion.

Cohen (1987) found that parental encouragement, as reported by parents, significantly predicted their children's educational and occupational expectations. Parental encouragement as perceived by high school students was also

found to be related to college plans (Sewell & Shah, 1968). In addition, perceived encouragement by people other than parents, such as friends and relatives, has been associated with educational expectations (Wilson & Portes, 1973; Herriot, 1968); the higher the expectations of significant others, the higher one's own expectations. Moreover, the expectations of those closer to the individual tended to have greater influence.

These findings strongly suggest that social persuasion, as measured by encouragement from parents and significant others, is associated with level of expectation. What remains unclear is whether a difference exists with regard to actual and perceived degree of encouragement. Both parental and student perceptions of encouragement have shown significant effects, while third-party reports have not been used thus far. Nevertheless, it seems that student perceptions of encouragement would provide the closest approximation to Bandura's concept of social persuasion. Because student perception represents the communication received by the student, it holds the strongest potential for influencing self-efficacy belief.

Taken together, previous studies on the proximal determinants of efficacy expectancies for educational and occupational attainment are consistent with Bandura's theory of how self-efficacy beliefs are developed. The factors found in the literature correspond to those postulated by Bandura.

Thus, Bandura's framework fits the extant data fairly well, and should prove useful in the investigation of self-efficacy beliefs about future educational and occupational attainment.

Distal Influences on Self-Efficacy Beliefs

The literature reviewed thus far has involved behavioral determinants of self-efficacy beliefs, namely the individual's history of success and failure, vicarious experiences, and verbal persuasions by others regarding the behavior of interest. These influences are not exhaustive, however. While less direct, more distal influences on expectations for level of educational and occupational attainment may also be important. Two of these factors, socioeconomic status and neighborhood, will be discussed.

Socioeconomic Status (SES). Previous research has consistently found a positive relationship between SES and the level of educational and occupational expectations among children and youth. In a series of studies, Sewell and his colleagues found that children of higher social class origins aspire to and expect higher educational and occupational goals than do children of lower SES origins (Sewell, Haller, & Portes, 1969; Sewell, Haller, & Ohlendorf, 1970; Haller & Portes, 1973). In a more recent study, Church and her colleagues (1991) found that low-income black students had significantly lower aspirations and expectations than middle-income white students. These differences persisted over the course of six years, from grades two to eight. Moreover, low-

income black children showed a greater discrepancy between the educational levels to which they aspired and the level they expected to attain.

These studies suggest that something inherent in socioeconomic status accounts for the observed difference in level of expectations. Unfortunately, socioeconomic status is a vague term with varying definitions (Gecas, 1979), none of which can adequately explain why some children expect a better future than others. For instance, the traditional measure of SES is a composite of parental education and family income, neither of which has been theoretically linked to expectancy beliefs. In order to explain why poor kids have lower expectations, more precise and concrete representations of socioeconomic status need to be invoked.

One such representation is the neighborhood in which children live. It is axiomatic that low SES individuals live in poor neighborhoods and higher SES groups live in better ones. Thus the neighborhood serves as a context in which differences in SES are manifested. Recently, the effects of neighborhood conditions have received a great deal of attention. In particular, there is growing concern about children who live in inner-city neighborhoods, as these areas have become increasingly disparate from middle-class neighborhoods (Wilson, 1987). Urban ghettoes have become concentrated pockets of economic decline and omnipresent danger, and have been likened to "war zones" (Garbarino,

1991). Questions about how such environments are affecting the psychological development of children remain unanswered. The following section will describe the effects of the neighborhood on development.

Neighborhood Context. The importance of the neighborhood in shaping people's lives has been described by Berger and Neuhaus (1980). In their formulation, the authors contend that the neighborhood constitutes a mediating structure, defined as an easily accessible institution mediating between an impersonal government and the individual. As a mediating structure, the neighborhood shapes and maintains the values of its residents and has the potential to empower them (Berger & Neuhaus, 1977). Starr (1992) also suggests that the development and sustenance of neighborhood resources, such as chess clubs, music groups, and historic preservations societies, help to overcome the social isolation that plagues America's ghettoes. The availability of neighborhood resources, in turn, constrain or facilitate the degree of participation of residents in meaningful activity (Zimmerman & Maton, 1992), and determines whether the poor effectively participate and integrate in mainstream society (Lewis, 1970).

In a notable study, Furstenberg (1990) also underscores the importance of neighborhood social resources to the well-being of children. Comparing two low-income neighborhoods, Furstenberg found surprising variation in how parents managed to promote opportunities, such as participation in academic

programs, for their children in spite of the danger present in their communities. In one neighborhood, which Furstenberg termed "anomic," resources were scarce and social ties virtually nonexistent. While some parents in this neighborhood were able to balance the competing priorities of keeping their children safe and promoting opportunities, most were not; their parenting strategies were simply overwhelmed by the numerous conflicting needs.

In contrast, parents in the other neighborhood were much more effective in juggling the risks and opportunities. This second neighborhood, labelled "dynamic," boasted a rich supply of community resources such as sports leagues and summer job programs, with residents who tended to have extensive social networks. Thus, while the two neighborhoods were comparable in socioeconomic status, the existence of community resources made the difference between successful and unsuccessful parenting strategies, which in turn affected the child's psychological development.

Further support for neighborhoood effects is found in Wilson's (1991) work on inner-city ghettoes. Drawing on Bandura's (1986) work on self-efficacy, Wilson asserts that these ghettoes, lacking economic and cultural resources such as stable jobs and conventional role models, undermine the development of self-efficacy. He notes that a neighborhood's decline causes the outmigration of the more successful residents, leaving behind an economically stagnant area with

residents low in job skills and ability. As Wilson (1990) states,

> "In the more socially isolated ghetto neighborhoods, networks of kin, friends, and associates are more likely to include a higher proportion of individuals who...tend to doubt that they can achieve approved societal goals. The self-doubts may exist either because of questions concerning their own capabilities or preparedness, or because they perceive severe restrictions imposed by a hostile environment" (p.11).

Thus Wilson points to the effect of the neighborhood on both efficacy expectancy and outcome expectancy.

To sum, a growing interest in the relationship between the neighborhood environment, particularly the inner-city urban neighorhood, and child outcomes has emerged in recent years. Although largely theoretical to date, researchers have begun to advance a link between negative social and physical environments and low self-efficacy. Bandura (1982) himself posited this relationship a decade ago; as he stated, people may become hopeless because "they expect their efforts to produce no results due to the unresponsiveness, negative bias, or punitiveness of the environment" (p.140). It appears that empirical investigation of this general idea is now being undertaken. For example, Rubin (1984) has suggested that neighborhood danger causes parents to keep their children at home, which in turn increases children's television viewing. Whether a similar relationship exists between neighborhood conditions and self-efficacy beliefs is an issue worthy of future investigation.

Taken together, the literature reviewed in the present paper provides the basis for the present study. First, prior research suggests that Bandura's model of self-efficacy development can also explain how self-efficacy beliefs about future educational and occupational attainment are formed. Specifically, Bandura's proposed determinants, past performance, vicarious experience, and social persuasion, are consistent with previous research on the determinants of educational and occupational expectations. However, because the notion of previous performance is problematic with respect to future educational and occupational attainment, alternative representations of this concept were presented. In particular, school performance and participation in academic and social activities seem to be reasonable indicators of previous performance. Second, distal influences such as the neighborhood context may also be important. Researchers have begun to acknowledge the relationship between self-efficacy and the environmental context. It is suggested that the neighborhoods in which children live affect the experiences critical to the development of self-efficacy beliefs. Thus, these socio-environmental factors exert their influence on the more proximal, behavioral factors, which in turn influence self-efficacy.

The Present Study

The present study examined the factors that influence self-efficacy beliefs among children residing in urban, inner-

city neighborhoods. In particular, self-efficacy beliefs about educational and occupational attainment were examined, as they represent important areas of future expectations for children. Three proximal influences were hypothesized based on Bandura's (1982) sources of self-efficacy information: previous performance, vicarious experience, and social persuasion. Research has confirmed the importance of these factors in predicting self-efficacy beliefs for simple behaviors (eg. Bandura & Adams, 1977); while evidence for a similar relationship with respect to more complex behaviors is less direct, findings thus far do not contradict the utility of Bandura's model for this type of behavior.

In addition, the importance of two distal influences were tested. Because past theoretical formulations suggest that the neighborhood environment affects developmental outcomes including self-efficacy, aspects of the neighborhood were expected to be influential. Specifically, it was hypothesized that neighborhood resources and neighborhood safety are related to self-efficacy beliefs.

Thus, the primary purpose of the study was to test the importance of three proximal (previous performance, vicarious experience, social persuasion) and two distal (neighborhood safety and neighborhood resources) factors in influencing self-efficacy beliefs. Table 1 summarizes the variables comprising the conceptual framework for this study.

Table 1

Variables comprising conceptual framework of the study

PREDICTOR DOMAINS	CRITERION DOMAINS
Proximal Influences	
1. Past Performance - Participation in Activities	1. Expectations for Educational Attainment - Efficacy Expectancy - Outcome Expectancy
2. Vicarious Experience - Educational and Occupational Attainment of Significant Others	
3. Social Persuasion - Perceived Expectations of Significant Others	2. Expectations for Occupational Attainment -Efficacy Expectancy -Outcome Expectancy
Distal Influences	
1. Neighborhood Safety	
2. Neighborhood Resources	

A secondary purpose of the study was to explore the distinction between efficacy expectancy and outcome expectancy. As discussed earlier, efficacy expectancy refers to the belief that one has the ability to perform a certain behavior, and outcome expectancy is the belief that the desired outcome will occur if the behavior is performed. Although theory has postulated the distinction between the two types of expectancies, there is little empirical evidence supporting this claim thus far. The distinction between the two types of expectancies may be especially relevant to inner-city children, as they may perceive more external obstacles to success than more privileged children, which may tend to lower their outcome expectations (Gurin & Gurin, 1970). Whether efficacy expectations can remain high in such conditions is an empirical question. Furthermore, it is unclear at what age the distinction between efficacy and outcome expectancy emerges. Thus, the present study served as an exploratory investigation of whether outcome expectancy is distinguished from efficacy expectancy among pre-adolescent urban youth. If outcome expectancy is perceived as being different from efficacy expectancy, we would expect different domains of predictors to be significant for each. For example, the domain of vicarious experience might be expected to predict outcome expectancy and not efficacy expectancy because vicarious experience indicates attainment rather than

abilities per se. The following section describes the major hypotheses tested in the present study.

Hypotheses

As shown in Table 1, the study tested the importance of three domains of proximal predictors hypothesized to influence self-efficacy beliefs. These domains represent Bandura's sources of information on which efficacy judgments are based (Bandura, 1983). First, past performance was indicated by participation in social, academic, and physical activities. Because it is impossible, by definition, to measure past performance of future educational and occupational attainment, the study used participation as an indicator of past performance. An alternative indicator, reading score, was used to assess whether successful involvement predicts self-efficacy better than involvement alone. Second, vicarious experience was indicated by the educational and occupational attainment of significant others. The attainment of significant others clearly fits Bandura's definition of vicarious experience, and has been shown to influence the aspirations and expectations of youth (eg. Cook & Curtin, 1987). Third, social persuasion was indicated by expectations of significant others, as perceived by the child. As social persuasion refers to the messages an individual receives regarding the behavior of interest, it seemed appropriate to assess the child's perceptions of others' expectations.

The study also included two distal predictors--neighborhood resources and neighborhood safety--as influences of self-efficacy beliefs. It is believed that resources and safety, as perceived by residents of a particular neighborhood, influence self-efficacy by faciliating or constraining participation in activities that promote efficacy. Thus, the first hypothesis was stated as follows:

Hypothesis 1: Greater participation in academic, social, and physical activities, higher educational and occupational attainment of significant others, higher perceived expectations of significant others, greater neighborhood resources, and greater neighborhood safety contribute uniquely to higher self-efficacy beliefs regarding educational and occupational attainment.

The present study also investigated the influence of neighborhood safety and resources on participation itself, independent of their effect on self-efficacy. Lack of neighborhood safety and resources are thought to hinder the development of self-efficacy by constraining the level of participation in academic and social activities. In other words, the level of participation depends on the degree of safety and the availability of resources. If the streets are unsafe and resources lacking, the level of participation would be lowered. Thus, the second hypothesis examined predictors of participation independent of self-efficacy, and was stated as follows:

Hypothesis 2: Increased neighborhood safety and resources uniquely contribute to greater participation in academic, social, and physical activities outside of school.

An informal pilot investigation was conducted by the author to gather preliminary empirical support for the above hypotheses. The findings are described in the following section.

Pilot Investigation

Pilot interviews were conducted with sixth graders at two elementary schools, one in an inner-city neighborhood in Los Angeles and one in a middle-class community in Orange County. This pilot effort involved informal, free-flowing class discussion guided by questions posed by the present investigation. Open-ended questions were posed to the students about their future aspirations and expectations, and their perceptions of their respective neighborhoods. The responses obtained revealed systematic differences among the students with respect to future expectations, participation in activities, vicarious experiences, and neighborhood environment, and therefore suggested that meaningful variations exist that call for systematic investigation. In particular, the students had uniform aspirations to attend college but varied in their expectations. Children from the middle-class neighborhood voiced higher expectations than did children from the poorer neighborhood. A wide range of

occupations was named in regards to career expectations, from doctor to police officer.

Among the three determinants of self-efficacy beliefs, support was found for the influence of participation and vicarious experience. For example, children whose parents had higher levels of educational and occupational attainment seemed to have higher expectations for themselves, and participation in academic and social activities corresponded to higher educational and occupational expectations in both the inner-city and middle-class groups. The poorer children reported fewer activities than the middle-class children, and had lower educational and occupational expectations. Children from the poorer community seemed to view such opportunities, mostly in the form of church or summer camp, as rare treats. The more affluent children, on the other hand, routinely participated in Little League, music lessons, and dance classes.

Some of this difference may be attributable to the amount of danger present in their respective neighborhoods. While the poorer neighborhood did provide community and recreational facilities such as the Boy's Club, some children expressed fear about the violence on the streets that prohibited them from seeking out such facilities. Children from this neighborhood described episodes in which they hid under cars or dropped to the ground to avoid getting shot, while others did not go out much because of the potential danger. In

contrast, the middle-class children named the presence of snakes in their neighborhood as a source of danger. They generally felt that their neighborhood were safe compared to those in Los Angeles.

Thus, the pilot interviews provided tentative empirical support for the hypothesized relationships among self-efficacy beliefs, participation in activities, vicarious experience, and neighborhood conditions. More importantly, when these preliminary findings are considered along with previous research, the need to investigate determinants of self-efficacy beliefs, particular in the context of an inner-city neighborhood, is apparent.

CHAPTER II

METHOD

Description of Study Sites

This study employed a correlational design to test the hypothesized relationships specified in the conceptual model. Since the primary objective was to study these relationships among children living in an inner-city neighborhood, participants were obtained from the City Terrace district of Los Angeles, an area of concentrated poverty and gang activity. However, in order to ensure variation in neighborhood safety and neighborhood resources, the middle-class community of Monterey Park was sampled as well. Thus the full sample consists of youth from an inner-city as well as a middle-class neighborhood.

The city of Monterey Park is situated northeast of Los Angeles proper, adjacent to the south of the more affluent city of Pasadena and to the east of East Los Angeles (East L.A.) and City Terrace, two of the most impoverished areas in Los Angeles. While Hispanic residents predominate in both East L.A. and City Terrace, Monterey Park is a city with a balanced mix of ethnic groups, including Asians, Hispanics, and Caucasians. A casual walk through Monterey Park reveals quiet and clean streets lined with trees, manicured lawns, and numerous yard sales on Sundays. Houses in the neighborhood are mostly single family dwellings designed in the Spanish-Californian tradition, with red-tiled roofs and white stucco

walls that remain free of graffiti despite their proximity to East L.A., where graffiti-marked buildings are commonplace. The city also boasts of several parks and recreation areas. Within a one-mile radius from Robert Hill Lane school where participants were recruited, two major recreation areas (Belvedere Park and East L.A. Community College) were observed, complete with baseball diamonds, soccer fields, basketball courts, and play areas for younger children. In addition, two public libraries and a comprehensive health clinic were noted. In contrast, City Terrace typifies the urban inner-city neighborhood; gang graffiti blanket buildings, broken-down and abandoned cars line the streets, and empty lots overgrown with weeds are interspersed among run-down houses. While the streets in Monterey Park are relatively empty, the presence of people are more evident on the streets of City Terrace, where people appear to be just "hanging out" at street corners.

Empirical data underscore the difference in character between the two neighborhoods. According to the 1990 Census, in City Terrace the median household income is $26,132, with 22.52% of the population living below the poverty line, whereas the respective figures are $38,565 and 14.65% for Monterey Park. Property values also demonstrate economic disparity; the mean price of homes for sale in June of 1993 was $277,000 in Monterey Park compared to $148,000 in City Terrace.

Because the participants were recruited at two schools, Harrison in City Terrace and Lane in Monterey Park, data from only those census tracts from which students are drawn were compared as well. The median family income was $30,813 for the Lane census tracts and $23,869 for Harrison, not quite as disparate as the figures for the entire zip code, as reported above, but nevertheless showing a marked difference. The mean price of homes for sale was $200,000 for the Lane area and $148,000 for Harrison.

Thus, both qualitative and quantitative data support the difference between City Terrace and Monterey Park in terms of physical and economic features. City Terrace fits the profile of an inner-city neighborhood and Monterey Park appears to be a middle-class community. The differences between the study sites ensures the variation in socioeconomic conditions necessary to test the hypothesized relationship between neighborhood conditions and self-efficacy beliefs.

Participants

Participants consisted of 159 fifth and sixth graders, aged 10 to 13, who reside City Terrace, East Los Angeles, and Monterey Park. This particular age group was selected because it represents the developmental stage during which children begin to make realistic assessments of their future, which then influences critical decisions such as whether or not to study hard or to join a gang. Thus, this age period

represents a critical juncture for preventive interventions of such outcomes.

Participants were recruited at two elementary schools--Harrison Elementary in City Terrace and Robert Hill Lane Elementary in Monterey Park. All fifth and sixth graders in both schools participated with the exception of those whose parents did not give consent. Inspection of the data, however, revealed that 9 of the 159 participants were actually fourth graders placed in a combined fourth/fifth grade classroom. As the study targets fifth and sixth graders (aged 10-13), data from those 9 participants were eliminated. Furthermore, data from all non-Hispanic participants (N=14) were also eliminated from the dataset in order to limit the interpretations of results to Hispanic children, leaving 136 participants in the final dataset.

Of the 136 participants, 46% (n=63) were male and 54% (n=73) were female. All were Hispanic, and their mean age was 11.29 years (SD=.78). Seventy-four percent (n=100) participated in the free lunch program at school, 7% (n=10) received reduced-price lunches, 0.7% (n=1) fully paid for lunch, and 16% (n=22) did not participate in the program. The majority of participants (n=126) were born in the United States.

Of the entire sample, a vast majority, 79% (n=107), lived in an inner-city neighborhood. This inner-city subsample consisted of 47 (44%) males and 60 (56%) females. Their mean

age was 11.28 years (SD=.79). Eighty-two percent (n=88) received free lunches at school, 7% (n=7) received reduced-price lunches, 1% (n=1) paid full price, and 8% (n=8) did not participate in the free lunch program.

Measures

The Efficacy Questionnaire was developed by the author to measure the domains specified in the conceptual model (see Appendix A). This instrument was pilot-tested with two representative participants for its suitability in length and language before the actual administration. Each of the conceptual domains surveyed in the questionnaire are described below.

Efficacy Expectancy for Educational Attainment. Efficacy expectancy for educational attainment was assessed by five items querying the respondent's self-perceptions with respect to abilities that facilitate educational attainment, such as being "smart" or "hardworking." An example of such an item is, "I am smart enough to go to college." Scores are based on a four-point Likert scale ranging from "very true" to "not true at all."

Outcome Expectancy for Educational Attainment. Outcome expectancy for educational attainment was assessed by five items measuring the perceived contingency between action and outcome. For example, one item is, "Even if I work hard enough, I still won't be able to go to college," which

assesses the expectation of going to college contingent upon working hard.

Efficacy Expectancy for Occupational Attainment. Similar to efficacy expectancy for educational attainment, this domain was assessed by four items querying self-perceived abilities that are related to career attainment, such as being "hard-working" and "having the right education." For example, repondents were asked, "I am hard-working enough to get the job I want." Ratings were scored on a four-point scale ranging from "very true" to "not true at all."

Outcome Expectancy for Occupational Attainment. Outcome expectancy for occupational attainment was assessed by five items measuring the perceived contingency between action and outcome. For example, one item is, "Even if I am smart enough, I still won't get the job I want," which assesses the perception of one's chances to get a desired job if he/she were smart enough.

Perceived Expectations of Others. This 10-item subscale measures the perceived expectations of significant others, particularly family, parents, teacher, and peers, regarding educational and occupational attainment. For example, one item is, "My parents expect me to go to college." Ratings were scored on a four-point scale ranging from "very true" to "not true at all."

Educational Attainment of Significant Others. The educational attainment of significant others was assessed by

five items asking the respondent whether family members or acquaintances attended college. Answers are coded categorically "yes," "no," or "don't know."

Occupational Attainment of Significant Others. The occupations of significant others were measured and quantified by the National Opinion Research Center Occupational Prestige Scores (Nakao & Treas, 1990). These scores are based on a survey of responses from a stratified random sample of people across the United States who were asked to rate the prestige of all occupations represented in the 1980 United States Census.

Participation in Activities. Participation in academic, social, and sports activities was assessed by 15 items scored on a four-point scale, ranging from "very often" to "never." Activities assessed include church attendance, music lessons, and youth gang involvement.

Neighborhood Resources. The Neighborhood Resources subscale, consisting of five items, refers to the extent to which respondents perceive social and recreational opportunities available in their respective neighborhoods. Items are scored on a four-point scale ranging from "very true" to "not true at all." An example of such an item is, "There are libraries in my neighborhood."

Neighborhood Safety. Neighborhood safety was assessed by six items referring to perceived danger and safety in the neighborhood. For example, respondents were asked to assess

the validity of the statement, "I sometimes hear gunshots near my house." Scores are based on a four-point scale ranging from "very true" to "not true at all."

In addition to the subscales described above, items measuring generalized beliefs about the future were included in the Efficacy Questionnaire as exploratory items. They include items tapping into the affective and value aspects of expectations. For example, respondents were asked to endorse the statement, "I will be disappointed if I don't go to college".

In addition to the Efficacy Questionnaire, three other measures were used to assess construct validity of the efficacy measure. Specifically, higher self-efficacy is expected to be related to higher levels of perceived self-competence (Zimmerman & Rappaport, 1988), perceived control (Zimmerman & Rappaport, 1988), and psychological adjustment (Cowen & Work, 1988; Garmezy, 1981).

Perceived Self-Competence. Perceived self-competence was assessed by the Self-Perception Profile for Children (SPPC; Harter, 1985), a 36-item self-report Likert scale designed to assess five domains of competence: scholastic, social, athletic, physical appearance, and behavioral conduct (see Appendix A). A sixth subscale measuring global self-worth was also included. The scale, appropriate for ages 8 to 14, has demonstrated adequate reliablity and validity. Internal consistency within subscales ranged from .73 to .86. Factor

analysis has confirmed the rationally derived domains (Harter, 1985).

Perceived Control. Perceived control was assessed by the Multidimensional Measure of Children's Perceptions of Control (MMCPC; Connell, 1985), a 48-item Likert-type scale designed to assess three sources of control (internal control, control by powerful others, and unknown control) within each of four domains (cognitive, social, physical, and general). The scale is appropriate for children aged 8 to 14, and has shown adequate reliability and validity. Internal consistency was greater than .60 for nine of the 12 subscales (Connell, 1985), and factor analytic results generally support the existence of the rationally derived subscales (Connell, 1985).

Psychological Adjustment. Psychological adjustment was assessed by the Teacher's Rating Form of the Child Behavior Checklist (TRF; Achenbach, 1991), a 113-item assessment of pupils' behavior by their teachers. Subscales reflect the problems areas of withdrawn behavior, somatic complaints, anxious/depressed symptoms, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. The scale has demonstrated adequate internal consistency (Cronbach's alpha ranged from .70 to .96 for subscales), stability (test-retest correlations at a two-month follow-up ranged from .61 to .86 for subscales), content validity, and discriminant validity (Achenbach, 1991).

Procedure

Participants were recruited from Harrison Elementary and Robert Hill Lane Elementary located in City Terrace and Monterey Park, respectively. In order to verify their residence in the respective neighborhoods, participants' addresses were obtained from school records. Informed consent (see Appendix B) was acquired from the parent or legal guardian of participants by asking participants to bring consent forms home and to return completed ones to class. As an incentive, pizza parties were promised to classes with 100% return rate of forms irrespective of consent or decline. Consent forms were available in both English or Spanish, and students had the choice of which version to bring home. After consent was obtained, questionnaires were administered orally by the author to groups of about twenty participants, who read along silently and recorded their answers on the questionnaire. This procedure mitigated against the misunderstanding of instructions as the administrator was able to note and respond to any questions that arose. To reduce the possibility of fatigue, a 15 minute break was taken at the midpoint of the session, which lasted about one hour and 15 minutes in its entirety.

Teachers were asked to fill out the Teacher's Rating Form independently.

Data were also obtained from school records for the following information: participants' address, ethnic

background, birthplace, meal plan, and most recent standardized reading score.

Data Preparation

Occupational aspirations and expectations of the participants and the occupations of significant others were coded according to the National Opinion Research Center Occupational Prestige Scores (Nakao & Treas, 1990), which provides scores for all occupations listed in the occupational classification scheme of the 1980 census. In cases where a description of an occupation was not specific enough, the score for the general category was used. To ascertain accurate scoring, a second rater was used and her results compared with those of the first rater. In cases where ratings differed, the raters conferred and agreement was reached based on the decision rules described above. Responses that were too vague, for example, "works in an office," were coded as missing data.

As shown in Table 2, composite variables were created from the Efficacy Questionnaire for two of the three sets of proximal predictor variables in order to distinguish source and domain of influence. Specifically, for the conceptual domain of attainment of significant others, four composite variables were created by forming linear combinations of items representing each composite variable. The four composite variables are family educational attainment, peer educational attainment, father's occupation, and mother's occupation. For

the conceptual domain of perceived expectation of significant others, three composite variables were created. These were teacher expectation, peer expectation, and parent expectation. The remaining proximal predictor, participation in extra-curricular activites, was represented by the linear combination of the participation items as described in the Measures section.

The distal predictor variables, neighborhood resource and neighborhood safety, were also linear combinations of the subscale items as described in the Measures section. The complete set of composite variables and their corresponding conceptual domains are listed in Table 2.

Table 2

Predictor variables and their corresponding conceptual domains

Conceptual Domain	Predictor Variable
I. Participation in Extra-Curricular Activities	A. Participation
II. Attainment of Significant Others	A. Family Educational Attainment B. Peer Educational Attainment C. Father's Occupation D. Mother's Occupation
III. Perceived Expectations of Significant Others	A. Teacher Expectation B. Peer Expectation C. Parent Expectation
IV. Neighborhood Resources	A. Resource
V. Neighborhood Safety	A. Safety

CHAPTER III

RESULTS

Psychometric Characteristics of Measures of Self-Efficacy and Related Constructs

Reliability

Table 3 reports internal consistency estimates for all subscales in each measure used in the study. Cronbach's alpha ranged from .14 to .89 for subscales contained in the Efficacy Questionnaire, .66 to .79 for the Self-Perception Profile for Children (SPPC) subscales, .65 to .87 for the Multidimensional Measure of Children's Perceptions of Control (MMCPC) subscales, and .37 to .95 for the subscales in the Teacher's Rating Form (TRF).

Construct Validity

Bivariate correlations between the Efficacy subscales and the SPPC, MMCPC, and TRF subscales were performed to assess convergent and divergent validity. It has been postulated that efficacy expectations are related positively to competence and internal control and negatively to external control and psychological problems (Zimmerman & Rappaport, 1988). The pattern of correlations presented in Table 4 appears to support these hypothesized relationships, as discussed below.

Table 3

Cronbach's alpha for subscales on measures used in the study

Scale	Cronbach's Alpha	Number of Items
Efficacy Questionnaire		
Educational Efficacy	.83	9
Occupational Efficacy	.81	9
Educational Outcome Expectancy	.86	5
Educational Efficacy Expectancy	.64	4
Occupational Outcome Expectancy	.89	5
Occupational Efficacy Expectancy	.48	4
Participation	.61	13
Family Educational Attainment	.26	4
Peer Educational Attainment	.14	2
Teacher Expectation	.78	2
Peer Expectation	.73	2
Parent Expectation	.62	3
Resource	.58	5
Safety	.68	5
Self-Perception Profile for Children		
Scholastic Competence	.73	6
Social Competence	.73	6
Athletic Competence	.79	6
Physical Appearance	.78	6
Behavioral Conduct	.66	6
Global Self-Worth	.75	6

Table 3 (Continued)

Cronbach's alpha for subscales on measures used in the study

Scale	Cronbach's Alpha	Number of Items
Multidimensional Measure of Children's Perceptions of Control		
Unknown Control	.87	16
Powerful Others' Control	.78	16
Internal Control	.65	16
Teacher's Rating Form		
Withdrawn	.65	9
Somatic Symptoms	.78	9
Anxious	.75	14
Social Problems	.61	8
Thought Problems	.37	7
Attention Problems	.81	11
Delinquency	.74	13
Aggressive	.91	20

Self-Perception Profile for Children (SPPC). Of the SPPC subscales, higher educational efficacy is significantly related to higher Scholastic Competence, the domain most conceptually similar to the domain of educational expectation. Higher educational efficacy is also significantly related to higher Athletic Competence, higher Social Competence, more positive Behavioral Conduct, and increased Global Self-Worth. Educational efficacy is unrelated to Physical Appearance as expected.

Occupational efficacy is positively related to higher Scholastic Competence, higher Social Competence, higher Athletic Competence, and more positive Behavioral Conduct. It is unrelated to Physical Appearance, as expected, and is also unrelated to Global Self-Worth. These latter findings support the premise that the Efficacy Questionnaire taps the specific domains of educational and occupational expectancies rather than global self-efficacy.

Multidimensional Measure of Children's Perceptions of Control (MMCPC). Among the MMCPC subscales, higher educational efficacy is associated with lower Control by Powerful Others and lower Unknown Control. As these two subscales are measures of an external locus of control in children, these findings support the theory that increased self-efficacy runs counter to an external locus of control (Bandura, 1982).

Higher occupational efficacy is associated with lower Unknown Control, thus demonstrating construct validity of the efficacy measure. The correlation of occupational efficacy with Control by Powerful Others approaches significance.

Both educational efficacy and occupational efficacy were unrelated to Internal Control on the MMCPC. The lack of relationship found may be due to the fact that educational and occupational success do not depend entirely on the beliefs in one's agency, but are also influenced by one's perception of whether one's actions will produce the desired outcome. These

results support the idea that efficacy and control, while related, are not synonomous (Skinner & Connell, 1986); efficacy, as elaborated by Bandura (1978, 1982), reflects both agent-means and means-end relationships. That is, overall efficacy refers to the belief that one can perform specific behaviors (efficacy expectancy, or agent-means expectancy) and whether these behaviors, if performed, would bring about desired outcomes (outcome expectancy, or means-end expectancy). Locus of control, on the other hand, refers only to the agent-end relationship; that is, can one control the outcome? It does not explicitly consider the agent-means or means-end relationships, and thus is not a construct isomorphic with efficacy.

Teacher's Rating Form (TRF). Educational efficacy is negatively related to a host of psychological problems as measured by the Teacher's Rating Form, including withdrawn behavior, anxiety, attention problems, delinquency, aggression, and total psychological symptomatology. Similarly, occupational efficacy is negatively related to attention problems, delinquency, aggression, and total psychological symptomatology. Thus, higher efficacy is related to better mental health, as expected.

In summary, the Efficacy Questionnaire appears to have adequate construct validity as indicated by correlations with the SPPC, MMCPC, and the TRF.

Table 4
Correlations among subscales of measures used in study

	ED	OC	SCHOLAR	SOCIAL	ATHLETIC	APPEAR
ED	1.000 (135) P= .	0.612 (132) P= .000	0.483 (128) P= .000	0.249 (129) P= .005	0.315 (128) P= .000	0.138 (127) P= .121
OC	0.612 (132) P= .000	1.000 (133) P= .	0.406 (127) P= .000	0.205 (129) P= .020	0.202 (127) P= .023	0.028 (126) P= .756
SCHOLAR	0.483 (128) P= .000	0.406 (127) P= .000	1.000 (129) P= .	0.349 (128) P= .000	0.469 (127) P= .000	0.291 (126) P= .001
SOCIAL	0.249 (129) P= .005	0.205 (129) P= .020	0.349 (128) P= .000	1.000 (130) P= .	0.426 (128) P= .000	0.397 (127) P= .000
ATHLETIC	0.315 (128) P= .000	0.202 (127) P= .023	0.469 (127) P= .000	0.426 (128) P= .000	1.000 (129) P= .	0.387 (126) P= .000
APPEAR	0.138 (127) P= .121	0.028 (126) P= .756	0.291 (126) P= .001	0.397 (127) P= .000	0.387 (126) P= .000	1.000 (128) P= .
BEHAVIOR	0.265 (123) P= .003	0.275 (121) P= .002	0.405 (121) P= .000	0.135 (122) P= .138	0.209 (122) P= .021	0.173 (120) P= .059
GLOBAL	0.196 (126) P= .028	0.154 (126) P= .085	0.531 (125) P= .000	0.464 (127) P= .000	0.495 (125) P= .000	0.650 (124) P= .000

Table 4 (Continued)
Correlations among subscales of measures used in study

	ED	OC	SCHOLAR	SOCIAL	ATHLETIC	APPEAR
UNKNOWN	-0.360	-0.175	-0.376	-0.479	-0.213	-0.204
	(130)	(128)	(125)	(126)	(125)	(124)
	P= .000	P= .048	P= .000	P= .000	P= .017	P= .023
POWER	-0.306	-0.169	-0.330	-0.280	-0.256	-0.224
	(131)	(128)	(126)	(127)	(126)	(125)
	P= .000	P= .056	P= .000	P= .001	P= .004	P= .012
INTERNAL	-0.110	0.005	-0.087	-0.126	0.033	-0.218
	(131)	(129)	(127)	(127)	(126)	(125)
	P= .211	P= .955	P= .333	P= .159	P= .714	P= .015
WITHDRAW	-0.277	-0.147	-0.319	-0.286	-0.339	-0.082
	(134)	(132)	(128)	(129)	(128)	(127)
	P= .001	P= .093	P= .000	P= .001	P= .000	P= .357
SOMATIC	-0.108	0.024	-0.229	0.001	-0.300	-0.154
	(135)	(133)	(129)	(130)	(129)	(128)
	P= .212	P= .789	P= .009	P= .996	P= .001	P= .082
ANXIOUS	-0.279	0.060	-0.193	-0.316	-0.253	-0.079
	(134)	(132)	(128)	(129)	(128)	(127)
	P= .001	P= .496	P= .029	P= .000	P= .004	P= .377
SOCPROB	-0.164	-0.096	-0.137	-0.077	-0.186	-0.104
	(133)	(131)	(127)	(128)	(127)	(126)
	P= .060	P= .275	P= .124	P= .388	P= .036	P= .248
THOUGHT	0.041	0.020	-0.070	-0.122	-0.190	0.006
	(134)	(132)	(128)	(129)	(128)	(127)
	P= .641	P= .818	P= .432	P= .167	P= .031	P= .947

Table 4 (Continued)
Correlations among subscales of measures used in study

	ED	OC	SCHOLAR	SOCIAL	ATHLETIC	APPEAR
ATTEND	-0.255 (133) P= .003	-0.218 (131) P= .012	-0.259 (127) P= .003	-0.057 (128) P= .521	-0.136 (127) P= .127	0.043 (126) P= .634
DELINQ	-0.252 (134) P= .003	-0.237 (132) P= .006	-0.146 (128) P= .100	0.084 (129) P= .343	0.022 (128) P= .804	0.124 (127) P= .164
AGGRESS	-0.179 (133) P= .039	-0.191 (131) P= .029	-0.069 (127) P= .444	0.130 (128) P= .143	0.066 (127) P= .460	0.121 (126) P= .176

	BEHAVIOR	GLOBAL	UNKNOWN	POWER	INTERNAL	WITHDRAWN
ED	0.265 (123) P= .003	0.196 (126) P= .028	-0.360 (130) P= .000	-0.306 (131) P= .000	-0.110 (131) P= .211	-0.277 (134) P= .001
OC	0.275 (121) P= .002	0.154 (126) P= .085	-0.175 (128) P= .048	-0.169 (128) P= .056	0.005 (129) P= .955	-0.147 (132) P= .093
SCHOLAR	0.405 (121) P= .000	0.531 (125) P= .000	-0.376 (125) P= .000	-0.330 (126) P= .000	-0.087 (127) P= .333	-0.319 (128) P= .000
SOCIAL	0.135 (122) P= .138	0.464 (127) P= .000	-0.479 (126) P= .000	-0.280 (127) P= .001	-0.126 (127) P= .159	-0.286 (129) P= .001

Table 4 (Continued)
Correlations among subscales of measures used in study

	BEHAVIOR	GLOBAL	UNKNOWN	POWER	INTERNAL	WITHDRAWN
ATHLETIC	0.209 (122) P= .021	0.495 (125) P= .000	-0.213 (125) P= .017	-0.256 (126) P= .004	0.033 (126) P= .714	-0.339 (128) P= .000
APPEAR	0.173 (120) P= .059	0.650 (124) P= .000	-0.204 (124) P= .023	-0.224 (125) P= .012	-0.218 (125) P= .015	-0.082 (127) P= .357
BEHAVIOR	1.000 (123) P= .	0.439 (121) P= .000	-0.160 (120) P= .081	-0.284 (121) P= .002	-0.130 (120) P= .156	-0.061 (123) P= .504
GLOBAL	0.439 (121) P= .000	1.000 (127) P= .	-0.309 (123) P= .001	-0.386 (124) P= .000	-0.124 (124) P= .169	-0.258 (126) P= .004
UNKNOWN	-0.160 (120) P= .081	-0.309 (123) P= .001	1.000 (131) P= .	0.477 (127) P= .000	0.415 (128) P= .000	0.165 (130) P= .061
POWER	-0.284 (121) P= .002	-0.386 (124) P= .000	0.477 (127) P= .000	1.000 (131) P= .	0.372 (128) P= .000	0.051 (130) P= .568
INTERNAL	-0.130 (120) P= .156	-0.124 (124) P= .169	0.415 (128) P= .000	0.372 (128) P= .000	1.000 (132) P= .	-0.116 (131) P= .185
WITHDRAW	-0.061 (123) P= .504	-0.258 (126) P= .004	0.165 (130) P= .061	0.051 (130) P= .568	-0.116 (131) P= .185	1.000 (135) P= .

Table 4 (Continued)
Correlations among subscales of measures used in study

	BEHAVIOR	GLOBAL	UNKNOWN	POWER	INTERNAL	WITHDRAWN
SOMATIC	-0.173	-0.199	0.138	0.015	0.062	0.428
	(123)	(127)	(131)	(131)	(132)	(135)
	P= .056	P= .025	P= .116	P= .863	P= .477	P= .000
ANXIOUS	-0.026	-0.219	0.332	0.205	0.076	0.504
	(123)	(126)	(130)	(130)	(131)	(135)
	P= .777	P= .014	P= .000	P= .020	P= .390	P= .000
SOCPROB	-0.170	-0.142	0.135	0.153	0.069	0.190
	(122)	(125)	(129)	(129)	(130)	(134)
	P= .061	P= .115	P= .126	P= .083	P= .438	P= .028
THOUGHT	-0.096	-0.106	0.119	0.184	0.001	0.242
	(123)	(126)	(130)	(130)	(131)	(135)
	P= .291	P= .238	P= .179	P= .036	P= .989	P= .005
ATTEND	-0.297	-0.067	0.194	0.260	0.097	0.301
	(122)	(125)	(129)	(129)	(130)	(134)
	P= .001	P= .457	P= .028	P= .003	P= .273	P= .000
DELINQ	-0.362	-0.006	0.116	0.169	0.079	0.172
	(123)	(126)	(130)	(130)	(131)	(135)
	P= .000	P= .945	P= .191	P= .055	P= .370	P= .046
AGGRESS	-0.370	0.051	-0.046	0.105	0.019	0.061
	(122)	(125)	(129)	(129)	(130)	(134)
	P= .000	P= .571	P= .607	P= .236	P= .834	P= .481

Table 4 (Continued)
Correlations among subscales of measures used in study

	SOMATIC	ANXIOUS	SOCPROB	THOUGHT	ATTEND	DELINQ
ED	-0.108	-0.279	-0.164	0.041	-0.255	-0.252
	(135)	(134)	(133)	(134)	(133)	(134)
	P= .212	P= .001	P= .060	P= .641	P= .003	P= .003
OC	0.024	-0.060	-0.096	0.020	-0.218	-0.237
	(133)	(132)	(131)	(132)	(131)	(132)
	P= .789	P= .496	P= .275	P= .818	P= .012	P= .006
SCHOLAR	-0.229	-0.193	-0.137	-0.070	-0.259	-0.146
	(129)	(128)	(127)	(128)	(127)	(128)
	P= .009	P= .029	P= .124	P= .432	P= .003	P= .100
SOCIAL	0.001	-0.316	0.001	-0.122	-0.057	0.084
	(130)	(129)	(128)	(129)	(128)	(129)
	P= .996	P= .000	P= .388	P= .167	P= .521	P= .343
ATHLETIC	-0.300	-0.253	-0.186	-0.190	-0.136	0.022
	(129)	(128)	(127)	(128)	(127)	(128)
	P= .001	P= .004	P= .036	P= .031	P= .127	P= .804
APPEAR	-0.154	-0.079	-0.104	0.006	0.043	0.124
	(128)	(127)	(126)	(127)	(126)	(127)
	P= .082	P= .377	P= .248	P= .947	P= .634	P= .164
BEHAVIOR	-0.173	-0.026	-0.170	-0.096	-0.297	-0.362
	(123)	(123)	(122)	(123)	(122)	(123)
	P= .056	P= .777	P= .061	P= .291	P= .001	P= .000
GLOBAL	-0.199	-0.219	-0.142	-0.106	-0.067	-0.006
	(127)	(126)	(125)	(126)	(125)	(126)
	P= .025	P= .014	P= .115	P= .238	P= .457	P= .945

Table 4 (Continued)
Correlations among subscales of measures used in study

	SOMATIC	ANXIOUS	SOCPROB	THOUGHT	ATTEND	DELINQ
UNKNOWN	0.138 (131) P= .116	0.332 (130) P= .000	0.135 (129) P= .126	0.119 (130) P= .179	0.194 (129) P= .028	0.116 (130) P= .191
POWER	0.015 (131) P= .863	0.205 (130) P= .020	0.153 (129) P= .083	0.184 (130) P= .036	0.260 (129) P= .003	0.169 (130) P= .055
INTERNAL	0.062 (132) P= .477	0.076 (131) P= .390	0.069 (130) P= .438	0.001 (131) P= .989	0.097 (130) P= .273	0.079 (131) P= .370
WITHDRAW	0.428 (135) P= .000	0.504 (135) P= .000	0.190 (134) P= .028	0.242 (135) P= .005	0.301 (134) P= .000	0.172 (135) P= .046
SOMATIC	1.000 (136) P= .	0.216 (135) P= .012	0.171 (134) P= .048	0.145 (135) P= .092	0.158 (134) P= .068	0.091 (135) P= .280
ANXIOUS	0.216 (135) P= .012	1.000 (135) P= .	0.306 (134) P= .000	0.453 (135) P= .000	0.299 (134) P= .000	0.325 (135) P= .000
SOCPROB	0.171 (134) P= .048	0.306 (134) P= .000	1.000 (134) P= .	0.125 (134) P= .149	0.628 (134) P= .000	0.454 (134) P= .000
THOUGHT	0.145 (135) P= .092	0.453 (135) P= .000	0.125 (134) P= .149	1.000 (135) P= .	0.348 (134) P= .000	0.269 (135) P= .002

Table 4 (Continued)
Correlations among subscales of measures used in study

	SOMATIC	ANXIOUS	SOCPROB	THOUGHT	ATTEND	DELINQ
ATTEND	0.158 (134) P= .068	0.299 (134) P= .000	0.628 (134) P= .000	0.348 (134) P= .000	1.000 (134) P= .	0.607 (134) P= .000
DELINQ	0.094 (135) P= .280	0.325 (135) P= .000	0.454 (134) P= .000	0.269 (135) P= .002	0.607 (134) P= .000	1.000 (135) P= .
AGGRESS	0.006 (134) P= .944	0.192 (134) P= .026	0.561 (133) P= .000	0.195 (134) P= .024	0.608 (133) P= .000	0.828 (134) P= .000

Prediction of Self-Efficacy Beliefs

The first hypothesis in this study stated that greater participation in academic, social, and physical activities, higher educational and occupational attainment of significant others, higher perceived expectations of significant others, greater neighborhood resources, and greater neighborhood safety are uniquely related to higher self-efficacy beliefs regarding educational and occupational attainment. Two regression analyses, one for the prediction of beliefs about educational attainment and one for the prediction of beliefs about occupational attainment, were conducted to test this hypothesis. In addition, to examine the generality of the hypothesized relationships, the regression models were further tested on a more homogeneous subsample consisting only of youth residing in the inner-city. In order to assess the presence of multicollinearity among the predictor variables in the regression equations, bivariate correlations among the predictor variables in each analyses were examined. The pattern and size, ranging from .00 to .37, of these correlations suggested that multicollinearity is not a significant problem influencing the regression analysis.

The following sections will discuss the results of the regression analyses as they pertain to educational attainment and occupational attainment.

Educational Attainment

A standard multiple regression was performed between efficacy beliefs about educational attainment (ED) as the criterion variable and participation in academic, social and physical activities (PART), family attainment (VICFAM), peer attainment (VICPEER), perceived teacher expectation (TEXP), perceived peer expectation (PEEREXP), perceived parent expectation (PAREXP), neighborhood resource (RESOURCE) and neighborhood safety (SAFETY) as the predictor variables. Table 5 displays the sums of square (*ss*), raw regression coefficient (*b*), standardized regression coefficient (β), t value (*t*), *R*, and R^2. The regression model was statistically significant, R^2=.26, *F* (8,112)=4.84, *p*<.001.

Two of the predictors, peer expectation and parental expectation, contributed significantly to the prediction of efficacy expectations for educational attainment. Specifically, controlling for all other variables in this model, higher perceived peer expectation and higher perceived parental expectation significantly contributed to a higher sense of self-efficacy regarding future educational attainment. The results also suggest that higher family educational attainment contributes to higher efficacy beliefs for education; this finding approached statistical significance, *p*=.06. The other hypothesized predictors, participation, peer attainment, teacher expectation, and

Table 5

Standard multiple regression of specified variables on educational self-efficacy: Full sample

Variables	SS	b	B	t	
PART	.685	.015	.017	.196	R =.51[c]
VICFAM	63.557	.796	.160	1.890	R^2=.26
VICPEER	4.170	.188	.043	.484	
TEXP	16.675	.297	.082	.968	
PEEREXP	78.995	.671	.189	2.107[a]	
PAREXP	483.932	.851	.418	4.968[c]	
RESOURCE	.885	.025	.019	.223	
SAFETY	34.089	-.137	-.119	-1.384	

[a] $p < .05$
[c] $p < .001$

Table 6

Standard multiple regression of specified variables on educational self-efficacy: Inner-city sample

Variables	SS	b	B	t	
PART	3.148	-.036	-.044	-.473	R =.60[c]
VICFAM	37.040	.696	.147	1.623	R^2=.36
VICPEER	3.864	.217	.052	.524	
TEXP	45.249	.768	.173	1.794	
PEEREXP	76.490	.786	.247	2.333[a]	
PAREXP	347.154	.835	.448	4.970[c]	
RESOURCE	15.437	.119	.098	1.048	
SAFETY	14.400	-.104	-.093	-1.012	

[a] $p < .05$
[c] $p < .001$

neighborhood resource and safety did not significantly contribute to the prediction of efficacy beliefs regarding educational attainment.

The hypothesized regression model was tested on a subgroup of the study sample consisting only of children residing in inner-city neighborhoods (n=107). As presented in Table 6, the pattern of results are identical to those for the full sample; the regression model was statistically significant, R^2=.36, $F(8,85)=5.98$, $p<.001$, and peer expectations and parental expectations proved to be significant predictors.

Occupational Attainment

For occupational attainment, a standard multiple regression was performed between efficacy beliefs (OC) as the criterion variable and participation in academic, social, and physical activities (PART), father's occupation (FAOCC), mother's occupation (MOOCC), perceived teacher expectation (TEXP), perceived peer expectation (PEEREXP), perceived parent expectation (PAREXP), neighborhood resource (RESOURCE) and neighborhood safety (SAFETY) as the predictor variables. As displayed in Table 7, the regression model was statistically significant, R^2=.37, $F(8,57)=4.20$, $p<.001$.

Consistent with the results pertaining to the prediction of efficacy beliefs for educational attainment, perceived peer expectation and perceived parental expectation contributed significantly to the prediction of efficacy expectations for

Table 7

Standard multiple regression of specified variables on occupational self-efficacy: Full sample

Variables	SS	b	B	t	
PART	.353	-.014	-.018	-.159	R =.61[c]
FAOCC	.097	-.003	-.009	-.084	R^2=.37
MOOCC	42.824	.039	.195	1.757	
TEXP	15.709	.433	.122	1.064	
PEEREXP	63.632	.782	.239	2.141[a]	
PAREXP	206.575	.890	.433	3.858[c]	
RESOURCE	2.228	.058	.047	.401	
SAFETY	.419	.021	.020	.174	

[a] $p < .05$
[c] $p < .001$

Table 8

Standard multiple regression of specified variables on occupational self-efficacy: Inner-city sample

Variables	SS	b	B	t	
PART	3.223	-.051	-.069	-.536	R =.68[c]
FAOCC	10.895	-.037	-.119	-.985	R^2=.47
MOOCC	17.523	.029	.146	1.249	
TEXP	.010	.016	.004	.031	
PEEREXP	83.929	1.003	.337	2.733[b]	
PAREXP	155.227	.865	.447	3.717[c]	
RESOURCE	40.316	.279	.245	1.894	
SAFETY	.606	-.030	-.029	-.232	

[b] $p < .01$
[c] $p < .001$

occupational attainment. Controlling for all other variables in the model, higher peer expectation and higher parental expectation were related to higher levels of efficacy regarding future occupational attainment. The results further suggested that increased status of mother's occupation is associated with higher levels of self-efficacy regarding future occupational attainment, although this finding only approached significance at $p=.08$. The other hypothesized factors--participation, father's occupation, teacher expectation, and neighborhood resource and safety--did not significantly contribute to the prediction of efficacy regarding occupational attainment.

The hypothesized regression model was again tested on a subsample of children residing in inner-city neighborhoods ($n=107$). The results found for the subsample are consistent with those for the full sample. As displayed in Table 8, the regression model was statistically significant, $R^2=.47$, $F(8,43)=4.72$, $p<.001$. Again, perceived peer expectation and perceived parental expectation significantly predicted self-efficacy for future occupational attainment, while the other hypothesized predictors did not.

In summary, the hypothesized regression model significantly predicted self-efficacy beliefs for both educational and occupational attainment. Specifically, among the predictors, higher perceived peer expectation and higher perceived parental expectation were significantly related to

higher efficacy for both educational and occupational domains. These findings held for both the full sample and the inner-city sample.

Alternative Model for the Prediction of Efficacy Beliefs

The results reported above show that participation in extra-curricular activities did not predict educational or occupational efficacy. As stated in the Introduction, participation was intended to represent the concept of previous performance, one primary source of information that Bandura (1982) has hypothesized to influence self-efficacy. Because it is impossible to measure the previous performance of future educational and occupational attainment, the concept of previous performance was modified and represented by participation, which reflects involvement in activities that provide feedback on education- and occupation-related knowledge and skills. It was also suggested, however, that success matters, that whether or not one's performance is successful may be more important than one's degree of involvement. To address this issue, an alternative model was tested wherein students' most recent standardized reading score, obtained in the California Test of Basic Skills, was substituted for participation as the indicator for previous performance. That is, reading score is intended here as an indicator for the level of success one has experienced in an academic activity rather than mere involvement. All other variables in the model remained the same. Again, as with the

original model, the regression analyses were performed on the subsample of inner-city youth as well as on the full sample in order to compare the pattern of results. Examination of the bivariate correlations among the predictors in this model indicate that multicollinearity is not likely to be a problem influencing the regression analyses. Results for the alternative model as applied to efficacy beliefs about future educational and occupational attainment are presented below.

Educational Attainment

Reading score (READ) was substituted for participation in a standard multiple regression predicting efficacy expectation in educational attainment (ED). All other predictors remained the same as in the original model. Table 9 displays the sums of square (*ss*), raw regression coefficient (*b*), standardized regression coefficient (β), t value (*t*), *R*, and R^2. The regression model was found to be statistically significant, $R^2=.35$, $F(8,110)=7.36$, $p<.001$.

Two of the predictors in the alternative model contributed significantly to the prediction of efficacy beliefs for future educational attainment. Specifically, partialling out the effects of all other variables in the model, higher parental expectations and higher reading score were related to higher levels of efficacy. Thus it appears that reading score is a better predictor of educational efficacy than is participation. Family educational attainment (VICFAM) approached statistical significance at $p=.06$,

Table 9

Standard multiple regression of alternative model on educational self-efficacy: Full sample

Variables	SS	b	B	t	
READ	173.153	.060	.286	3.290[b]	R =.59[c]
VICFAM	58.955	.801	.158	1.920	R^2=.35
VICPEER	41.358	.566	.134	1.608	
TEXP	10.804	.259	.067	.822	
PEEREXP	30.640	.432	.117	1.384	
PAREXP	228.606	.682	.324	3.784[c]	
RESOURCE	.077	.007	.006	.070	
SAFETY	51.772	-.174	-.147	-1.799	

[b] $p < .01$
[c] $p < .001$

Table 10

Standard multiple regression of alternative model on educational self-efficacy: Inner-city sample

Variables	SS	b	B	t	
READ	183.537	.077	.350	3.958[c]	R =.69[c]
VICFAM	39.107	.750	.153	1.827	R^2=.48
VICPEER	35.215	.599	.152	1.734	
TEXP	44.524	.733	.165	1.949	
PEEREXP	24.771	.450	.133	1.454	
PAREXP	178.788	.657	.339	3.906[c]	
RESOURCE	13.722	.110	.091	1.082	
SAFETY	18.245	-.118	-.102	-1.248	

[c] $p < .001$

suggesting that higher levels of education among family members may contribute to higher educational self-efficacy. Peer attainment, teacher expectation, peer expectation, and neighborhood resources and safety did not significantly contribute to the prediction of efficacy beliefs regarding future educational attainment.

The alternative model was applied to the subsample of inner-city children (n=107). Again, as shown in Table 10, the pattern of results was consistent with those for the full sample. The regression model was statistically signficant, R^2=.48, $F(8,85)=9.87$, $p<.001$. Among the predictor variables, higher reading score and higher perceived parental expectations were related to higher educational efficacy.

Occupational Attainment

Reading score (READ) was substituted for participation in a standard multiple regression predicting efficacy regarding future occupational attainment (OC). All other predictor variables remained the same as in the original model. As shown in Table 11, the regression model was statistically significant, R^2=.47, $F(8,56)=6.15$, $p<.001$.

Two of the variables in the model contributed significantly to the prediction of efficacy beliefs about future occupational attainment; specifically, higher peer expectations and higher parental expectations were uniquely related to higher levels of efficacy. Mother's occupation

Table 11

Standard multiple regression of alternative model on occupational self-efficacy: Full sample

Variables	SS	b	B	t	
READ	20.248	.026	.144	1.358	R =.68[c]
FAOCC	4.809	.022	.072	.662	R^2=.47
MOOCC	11.937	.021	.111	1.043	
TEXP	15.232	.423	.126	1.178	
PEEREXP	78.112	.862	.272	2.667[a]	
PAREXP	229.697	.934	.483	4.573[c]	
RESOURCE	.001	.001	.000	.009	
SAFETY	.780	-.030	-.028	-.266	

[a] $p < .05$
[c] $p < .001$

Table 12

Standard multiple regression of alternative model on occupational self-efficacy: Inner-city sample

Variables	SS	b	B	t	
READ	19.190	.031	.170	1.577	R =.77[c]
FAOCC	.192	-.005	-.018	-.158	R^2=.59
MOOCC	4.592	.015	.081	.772	
TEXP	.107	.050	.013	.118	
PEEREXP	86.613	1.048	.366	3.351[b]	
PAREXP	164.020	.881	.496	4.611[c]	
RESOURCE	20.321	.192	.182	1.623	
SAFETY	.997	-.039	-.039	-.359	

[b] $p < 01$
[c] $p < .001$

approached statistical significance at p=.08. Thus, increased status of mother's occupation may contribute to higher efficacy beliefs.

As with educational efficacy, the prediction of self-efficacy beliefs about occupational attainment was assessed for the subsample of inner-city children. As displayed in Table 12, results show the regression model to be statistically significant, R^2=.59, $F(8,42)$=7.67, p<.001. Similar to the findings for the full sample, only perceived peer expectation and perceived parental expectation significantly contributed to efficacy beliefs about future occupational attainment.

Interestingly, reading score did not predict self-efficacy beliefs regarding future occupational attainment for either sample as it did educational attainment, suggesting that feedback about success is specific to a particular domain, and is applied to only that domain in one's efficacy estimations. This explanation is congruent with Bandura's contention that efficacy beliefs are not global but are rather behavior-specific.

In summary, the substitution of reading score in place of participation as an indicator for previous performance added to the explanatory power of the regression model. Higher reading score significantly predicted higher levels of educational efficacy whereas participation did not. However, reading score was unrelated to occupational efficacy, thus

suggesting that previous success influences self-efficacy only within the same behavioral domain. For educational efficacy, perceived parental expectation was also a significant predictor, in addition to reading score. For occupational efficacy, perceived parental expectation and perceived peer expectation were significant predictors. These findings were identical for both the overall sample and the inner-city group.

Prediction of Participation in Extra-Curricular Activities

The second hypothesis in this study stated that increased neighborhood safety and resources are uniquely related to greater participation in academic, social, and physical activities. A standard multiple regression was performed to test this hypothesis, with participation (PART) as the criterion variable and safety (SAFETY) and resource (RESOURCE) as predictor variables. As displayed in Table 13, the regression model was statistically significant, $R^2=.07$, $F(2,122)=4.32$, $p<.05$. Higher levels of neighborhood resource predicted increased participation, while neighborhood safety was not related to participation.

For the inner-city subsample, the regression model was also statistically significant, $R^2=.10$, $F(2,94)=5.22$, $p<.01$, as shown in Table 14. For this subgroup, both neighborhood resources and neighborhood safety sigificantly contributed to the prediction of participation. Greater neighborhood resources was associated with higher participation in extra-

Table 13

Standard multiple regression of neighborhood factors on participation: Full sample

Variables	SS	b	B	t	
RESOURCE	228.316	.380	.253	2.882[b]	R =.26[a]
SAFETY	18.386	-.095	-.072	-.818	R^2=.07

[a] $p < .05$
[b] $p < .01$

Table 14

Standard multiple regression of neighborhood factors on participation: Inner-city sample

Variables	SS	b	B	t	
RESOURCE	185.188	.376	.255	2.600[b]	R =.32[b]
SAFETY	107.991	-.267	-.194	-1.986[a]	R^2=.10

[a] $p < .05$
[b] $p < .01$

curricular activities, while lower neighborhood safety was related to increased participation.

In summary, the specified regression model was statistically significant for both the larger and the inner-city sample. However, the model accounted for a very small proportion of the variance in participation in both samples, suggesting that other factors, as yet unmeasured, contribute to the prediction of participation in extra-curricular activities. Several factors will be raised as possible influences in the Discussion section.

Efficacy Expectancy Versus Outcome Expectancy

An issue raised in this study is the distinction between efficacy expectancy and outcome expectancy. According to Bandura, efficacy expectancy refers to the belief that one can perform a certain behavior, and outcome expectancy refers to the belief that the behavior will produce the desired outcome (Bandura, 1983). Although this distinction is conceptually clear, whether or not people actually separate the two types of expectancies when assessing self-efficacy remains equivocal. For example, Kazdin (1979) claims that outcome expectancies override efficacy expectancies, because if a person believes that a desired outcome cannot be attained, then a judgment about efficacy is superfluous.

In order to examine whether Hispanic children growing up in Los Angeles responded differently to questions about efficacy expectancy versus outcome expectancy, items that

represent outcome expectancy were separated from those representing efficacy expectancy, and regression analyses were performed with each as criterion variables. The same predictor variables were used as in the original analyses. If the two types of expectancies were conceptualized differently by the children, we would expect differences in the pattern of predictors between the two regression models. Specifically, we would expect outcome expectancy and efficacy expectancy to be related to different domains of predictors. As above, these results will be discussed as related to future educational and occupational attainment.

Educational Attainment

Outcome Expectancy. A standard multiple regression was performed between outcome expectation in educational attainment (EDCON) as the criterion variable and participation (PART), family attainment (VICFAM), peer attainment (VICPEER), perceived teacher expectation (TEXP), perceived peer expectation (PEEREXP), perceived parent expectation (PAREXP), neighborhood resource (RESOURCE) and neighborhood safety (SAFETY) as the predictor variables. As displayed in Table 15, the regression model was statistically significant, R^2=.21, $F(8,112)=3.61$, $p<.001$. Only one variable in the model

Table 15

Standard multiple regression of specified variables on outcome expectancy for educational attainment

Variables	SS	b	B	t	
PART	.340	-.010	-.015	-.173	R =.45[c]
VICFAM	26.849	.517	.135	1.539	R^2=.21
VICPEER	.826	.083	.025	.270	
TEXP	14.717	.279	.100	1.140	
PEEREXP	19.277	.331	.121	1.304	
PAREXP	247.361	.639	.406	4.672[c]	
RESOURCE	.460	-.084	-.018	-.202	
SAFETY	8.020	-.066	-.074	-.841	

[c] $p < .001$

Table 16

Standard multiple regression of specified variables on efficacy expectancy for educational attainment

Variables	SS	b	B	t	
PART	1.990	.025	.072	.814	R =.45[b]
VICFAM	7.788	.278	.142	1.610	R^2=.21
VICPEER	1.283	.104	.060	.654	
TEXP	.061	.018	.013	.143	
PEEREXP	20.226	.340	.242	2.595[a]	
PAREXP	27.279	.212	.263	3.014[b]	
RESOURCE	2.622	.044	.084	.934	
SAFETY	9.040	-.071	-.154	-1.735	

[a] $p < .05$
[b] $p < .01$

predicted outcome expectancy in this domain. Specifically, higher parental expectations was related to higher outcome expectancy for educational attainment, holding constant all other variables in the model.

Efficacy Expectancy. The same regression model was tested with efficacy expectancy (EDEFF) as the criterion variable. As shown in Table 16, the model was statistically significant, R^2=.20, $F(8,112)=3.54$, $p<.01$. The results indicate that higher peer expectation and higher parent expectation were significant predictors of higher efficacy expectancy for educational attainment. One other predictor, neighborhood safety, approached statistical significance at p=.09.

Occupational Attainment

Outcome Expectancy. A standard multiple regression was performed between outcome expectation in the domain of occupational attainment (OCCON) as the criterion variable and participation (PART), father's occupation (FAOCC), mother's occupation (MOOCC), perceived teacher expectation (TEXP), perceived peer expectation (PEEREXP), perceived parent expectation (PAREXP), neighborhood resource (RESOURCE) and neighborhood safety (SAFETY) as the predictor variables. As displayed in Table 17, the regression model was statistically significant, R^2=.25, $F(8,58)=2.42$, $p<.05$. As with educational attainment, only one variable in the model contributed significantly to the prediction of outcome expectancy

regarding occupational attainment. The findings indicate that higher parental expectations were related to higher outcome expectancy for occupational attainment. The prestige of mother's occupation was nearly statistically significant at $p=.10$.

Efficacy Expectancy. The same regression model was tested with efficacy expectancy (OCEFF) as the criterion variable. As shown in Table 18, the model was significant, $R^2=.42$, $F(8,57)=5.13$, $p<.001$. As indicated in Table 18, higher peer expectation and higher parental expectation were associated with higher efficacy expectancy for occupational attainment. The results also indicate that greater neighborhood resources may contribute to higher efficacy expectancy.

Thus, the findings discussed above do not point to distinction between outcome expectancy and efficacy expectancy for the pre-adolescent children in this sample, as the same pattern of predictors emerged for both types of expectancies. That is, the same conceptual domain, perceived expectations of significant others, predicted both outcome expectancy and efficacy expectancy for both educational and occupational attainment. However, within that domain, peer expectation as well as parental expectation was significantly related to efficacy expectancy, whereas only parental expectation was related to outcome expectancy. This may suggest that peers, as well as parents, influence what children think about their abilities, while only parents influence what kids think about

their ultimate success. Nevertheless, this interpretation is equivocal since both predictors fall under the same conceptual domain--that of social persuasion. It appears that further study is needed before any conclusions are reached about whether urban, pre-adolescent children make a distinction between outcome and efficacy expectancy with respect to future educational and occupational attainment.

Table 17

Standard multiple regression of specified variables on outcome expectancy for occupational attainment

Variables	SS	b	B	t	
PART	.434	-.017	-.026	-.207	R =.50[a]
FAOCC	1.253	.010	.042	.351	R^2=.25
MOOCC	29.220	.032	.203	1.694	
TEXP	9.874	.334	.122	.985	
PEEREXP	6.329	.246	.095	.789	
PAREXP	107.525	.618	.397	3.250[b]	
RESOURCE	1.246	-.042	-.045	-.350	
SAFETY	1.354	-.038	-.045	-.365	

[a] $p < .05$
[b] $p < .01$

Table 18

Standard multiple regression of specified variables on efficacy expectancy for occupational attainment

Variables	SS	b	B	t	
PART	.000	.000	.001	.013	R =.65[c]
FAOCC	2.084	-.013	-.102	-.950	R^2=.42
MOOCC	1.279	.007	.079	.745	
TEXP	1.085	.114	.076	.686	
PEEREXP	29.605	.533	.383	3.582[c]	
PAREXP	20.822	.283	.324	3.004[b]	
RESOURCE	7.358	.105	.202	1.786	
SAFETY	3.344	.060	.132	1.204	

[b] $p < .01$
[c] $p < .001$

CHAPTER IV

DISCUSSION

Prediction of Self-Efficacy Beliefs

The primary purpose of this study was to investigate the determinants of self-efficacy beliefs among urban youth regarding future educational and occupational attainment. Three major proximal determinants were postulated based on Bandura's (1982) theory of self-efficacy development. Using the model as a theoretical framework, previous performance, vicarious experience, and social persuasion were conceptualized as primary proximal sources of influence on which self-efficacy beliefs are based. The central hypothesis of this study, therefore, was that indicators of these conceptual domains, consisting of participation in extra-curricular activities, significant others' attainment, and perceived expectations of significant others, would be positively related to self-efficacy beliefs about future educational and occupational attainment.

Results showed that the specified regression model significantly predicted efficacy levels for both educational and occupational attainment. However, not all of the hypothesized predictors significantly contributed to the prediction of self-efficacy. For both future educational and occupational attainment, higher perceived peer expectation and higher perceived parental expectation were related to higher self-efficacy beliefs. Thus it appears that, of the three

conceptual domains, the social messages a child receives is the strongest source of influence of his or her expectations for future attainment. Previous performance, when indicated by participation in extra-curricular activities, did not significantly contribute to the prediction of self-efficacy beliefs. However, when indicated by reading score, previous performance was related to self-efficacy for educational attainment. The other domain of proximal predictors, vicarious experience, proved to be nonsignificant in predicting self-efficacy. This pattern of results held for the entire sample of Los Angeles school children as well as a subsample consisting only of children living in the inner-city. Each of the three proximal predictors will be further discussed below.

Proximal Influences

Previous Performance. Contrary to Bandura's assertion, previous performance, as indicated by participation in extra-curricular activities, did not prove to be a significant source of influence. However, because participation seems to reflect involvement in skill- and task-related activities rather than one's degree of past success, an alternative model was tested wherein reading score, an indicator for the level of past success in academics, was substituted for participation. In this model, reading score significantly predicted self-efficacy regarding future educational attainment, suggesting that whether or not one is successful

is an important aspect of the feedback one gains from previous experience, and that involvement alone may be insufficient. The fact that reading score was unrelated to self-efficacy regarding future occupational attainment confirms its utility as a proxy for previous academic success and not for, say, intelligence. That is, a broader concept such as intelligence would be expected to predict efficacy judgments about future occupational attainment as well as education, whereas previous academic success is expected to relate specifically to judgments about academic attainment, as is the case here. Thus, it appears necessary to specify the behavioral domain in which one is interested when measuring self-efficacy beliefs and their predictors. This is consistent with Bandura's conception of self-efficacy as behavior- and situation-specific rather than global and trait-based.

The results disconfirming the influence of current participation in extra-curricular activities appear to contradict those of Keyser and Barling (1981). In that study, classroom participation predicted academic efficacy while reading score did not, leading the authors to speculate that classroom participation served as a continuous source of feedback on which efficacy judgments can be based, as opposed to a single, less immediate source. This discrepancy in findings may be attributed to the difference in the type of activity for which participation was measured. While Keyser and Barling measured classroom participation, the present

study looked at participation in academic, social, and physical activities outside the classroom. Thus, the activities in the present study encompass a broader range and approximate less closely the behavioral domain of educational attainment than does Keyser and Barling. Given that participation in this study is conceptualized more broadly, it might be expected to correlate with psychological adjustment in general, as opposed to self-efficacy beliefs in a particular domain. Indeed, examination of the bivariate correlation between participation and global self-worth, as measured by the Children's Profile of Perceived Competence (Harter, 1985), reveals a significant relationship (r=.31, p<.001).

Vicarious Experience. Vicarious experience fell just short of statistical significance as a predictor of future educational and occupational attainment. Thus results from this study are discrepant from previous studies demonstrating the influence of modeling on self-efficacy beliefs (ie. Keyser & Barling, 1981; Bandura & Adams, 1977). Two explanations for this apparent contradiction should be considered. First, modeling has been found to be more important in white-collar homes, and verbal encouragement more important in blue-collar homes (Cohen, 1983), perhaps because the range of role models are more limited for lower-class children. As the majority of participants in the study are from working class families,

vicarious experience proved to be less important than direct social communication.

Second, the behavior of interest in the present study, self-efficacy beliefs about educational and occupational attainment, may be too complex and distal for modeling to have a major effect. For example, knowing that one's parents attended college or that they have a good job does not provide much knowledge or insight into how that is achieved. As Bandura (1978) states, "the amount of skill that can be transmitted through modeling depends on the nature of the task, the frequency and distinctiveness of exemplifications...and whether they highlight transitions between organized subunits of behavior...." (p.249) Presumably, the closer the approximation to the desired task, the greater the modeling effect. Because attending college or getting a good job actually comprise many complex and some still-unknown subunits of behavior (getting good grades, graduating high school, etc.), the fact that a significant other has been successful does not necessarily provide reliable information on which one's own expectations are built, particularly if the significant other is an authority figure who seems to possess infinite knowledge and skill anyway.

It would be interesting, therefore, to explore the influence of modeling by a significant other more like the targeted participant, such as an older sibling. In such a

case, the subunits of behavior would be more readily observable by the child. For example, the child may be able to witness his/her sibling preparing for a job interview and getting a job, or taking the Scholastic Aptitude Test and being admitted to college. Questions referring to older siblings were included in the present study, but because the majority of siblings were not yet college-age, the effects of a more immediate role model could not be examined.

Social Persuasion. Social persuasion was found to be the strongest predictor of self-efficacy beliefs regarding future educational and occupational attainment in the targeted population. Thus, what parents and others communicate seem to be of paramount importance in shaping the self-efficacy beliefs of inner-city youth. This is not surprising given the population under study and the nature of the behavior of interest. Because a college education and a desired profession are largely unknown entities to inner-city children, they have little information about their chances for future success other than what their parents tell them. Thus these results are consistent with Ogbu's thesis that explicit and implict messages from parents are critical to children's assessment of their abilities and chances for future success (Ogbu, 1981).

Distal Influences

Neither neighborhood resources nor neighborhood safety was directly related to self-efficacy beliefs about future

educational or occupational attainment. This is not surprising given the conceptually distal nature of these predictors. Because they represent the larger social and physical context in which the phenomenon of interest manifests, they may not directly affect self-efficacy. Instead, their influence is likely to be exerted through more proximal predictors such as participation or parenting strategy. For example, Furstenberg (1990) demonstrated that neighborhood resource and violence affected parenting practice, which in turn affected child outcome. Future research investigating the relationship between neighborhood factors and child psychological outcomes should consider mediating factors such as parenting strategy.

Prediction of Participation in Extra-Curricular Activities

The second hypothesis stated that increased neighborhood safety and resources are uniquely related to greater participation in extra-curricular activities. The specified regression model was statistically significant in predicting participation for both the full sample and the inner-city sample. However, only neighborhood resources significantly contributed to the prediction of participation for the full sample, while both resource and safety were significant predictors among the inner-city sample. The relationship of neighborhood resources and neighborhood safety to participation will be further discussed below.

Neighborhood Resources

The significant relationship found between resources and participation confirms part of the second hypothesis. Specifically, higher perceived neighborhood resource is related to higher rates of participation in extra-curricular activities. This finding seems obvious in that participation is expected to be contingent upon the availability of activities in which to participate. One caveat about this relationship should be noted, however. Because neighborhood resource was assessed from the perspective of the children, it may be inferred that their perceptions of neighborhood resources were influenced by their rates of participation. In other words, the higher the participation, the higher the perceived resources.

In order to explore whether resources, when measured by neighborhood of residence, is related to participation, children in the sample who lived in the inner-city neighborhood were compared to those residing in the middle-class neighborhood. No difference was found between the two groups in the total rate of participation in all activities. Thus, it is possible that while higher perceived resources is related to participation, actual resource level may be unrelated. However, as the relationship between resources and participation may depend on type of activity, comparisons between groups on specific types of activity should be undertaken. Preliminary analyses addressing this point

provide some tentative support; that is, residents of the middle-class neighborhood participated more in sports leagues and scouts than did residents of the poor neighborhood, thus suggesting that, for certain activities, neighborhood resources do make a difference.

As the study targets the population of Hispanic children living in Los Angeles, a possible influence of participation is the extent of acculturation experienced by the children and their families. Those who are less acculturated may be less involved in community activities due to a lack of familiarity with language, culture, and resources. To test this hypothesis, children who were born in the United States were compared to children born elsewhere with respect to participation, and U.S. born children were found to participate significantly more (t=4.13, p<.001). Unfortunately, while this finding is suggestive of an acculturation effect, the low number (n=10) of children born outside of the United States in the present sample renders it unreliable, and further study should be undertaken before reaching any conclusions.

Neighborhood Safety

Perception of neighborhood safety significantly predicted participation among inner-city children but not among the entire sample. Among children residing in the inner-city, lower perceived safety was associated with increased participation in extra-curricular activities. In other words,

children who viewed their neighborhood as less safe were more likely to participate in extra-curricular acivities. This finding contradicts the hypothesized relationship--that increased safety would be related to increased participation. Among the more heterogeneous sample, safety is not a significant factor in influencing participation. However, for both samples, only a small percentage of variance was accounted for in participation, suggesting that the decision to participate or not may be influenced by other factors not measured in the present study, such as parental values or acculturation.

Among inner-city children, perceptions of greater danger may prompt them to engage more in instrumental activities as a way of avoiding harm. As noted in the pilot study, children living in dangerous neighborhoods overwhelmingly reported incidences in which they dodged gunfire while on the street. Participating in after-school activities, therefore, may take the place of "hanging out" or loitering in streets that may be too dangerous. This explanation is purely speculative, however, as it does not account for why children don't avoid all participation and stay indoors as much as possible where it is safe, as was suggested by Rubin's study (1984). Additionally, the relationship between perceived danger and participation may depend on type of activity; that is, greater danger may prompt higher participation in supervised, structured activities which enhance a sense of safety but may

have little effect on participation in other types of activities.

In summary, these results suggest that the relationship between neighborhood safety, neighborhood resources, and participation is rather complex, perhaps involving variables such as type of activity, parenting strategy, and cultural familiarity, and is deserving of future study.

Outcome Expectancy Versus Efficacy Expectancy

The secondary purpose of the study was to explore the distinction between efficacy expectancy and outcome expectancy among urban pre-adolescents. According to Bandura (1982), efficacy expectancy refers to the belief that one has the ability to perform a certain behavior, and outcome expectancy refers to the belief that, if the behavior is performed, the desired outcome will ensue. It has been suggested that people of lower socioeconomic backgrounds have lower overall efficacy due to lower outcome expectancy, regardless of their beliefs about their own abilities (Gurin & Gurin, 1970). Despite these theories, however, the distinction between the two types of expectancies has been difficult to disentangle empirically. The present study looked at whether the same pattern of predictors emerge for outcome expectancy as for efficacy expectancy in the targeted population.

Multiple regression analyses showed that social persuasion predicted both efficacy expectancy and outcome expectancy. That is, the messages children receive influence

their beliefs about their abilities as well as judgments about whether their goals will be reached. More significant, however, is the fact that the two types of expectancies were not differentiated by different domains of predictors. For example, one might expect vicarious experience to be related to outcome expectancy and not efficacy expectancy because vicarious experience conveys a sense of what is achievable rather than what abilities one might possess. Or, previous performance might be expected to predict efficacy expectancy and not outcome expectancy because it conveys more information about one's abilities. However, such differences were not found. Thus, the findings do not point unequivocally to a distinction between efficacy expectancy and outcome expectancy for the domains of future educational and occupational attainment among urban, pre-adolescent children. The findings do suggest, however, that further examination of this issue is warranted, as different predictors were significant <u>within</u> the domain of social persuasion for the two types of expectancies. That is, peer expectation, as well as parental expectation, was significantly related to efficacy expectancy, while only parental expectation predicted outcome expectancy for both educational and occupational attainment. Thus, a clear distinction may be present, as Bandura contends, but detection may require more sensitive measurement.

A related issue raised in the Introduction was whether lower-class children evidence lower outcome expectancies than

middle-class children due to perceiving greater external barriers to achievement. Group comparisons show no difference between inner-city and middle-class youth on outcome expectancies, nor on goal deflection (the difference between aspiration and expectation). However, as previous research has shown that expectations among low SES children starts to decline around sixth grade (Kerckhoff, 1971), the older end of the present sample, this aspect of the study should be replicated with older youth to see if and at what point a cognitive distinction between efficacy and outcome expectancies emerges.

Limitations of the Study

Causality

As with any correlational study, the direction of causality in the relationships examined in this study cannot be inferred. Although the study conceptualizes certain variables as determinants and others as outcomes, it is not clear that the determinants are temporally prior in the "real world." In order to establish causality, longitudinal designs need to be employed. Even in a longitudinal study, however, the direction of causality may simply depend on the framework being used, and hence may be arbitrary. That is, one's existing level of self-efficacy may influence a "determinant" such as performance as much as performance influences self-efficacy. Some suggested mechanisms by which this occus is the raising of interest and motivation (Bandura, 1977),

selective attention to information (Bandura, 1977), and self-enhancing attributions (Skinner & Connell, 1986). Bandura (1982) himself has used a model of reciprocal determinism to describe the relationship between the "determinants" and the "outcome."

Generalizability

The present study investigates the determinants of self-efficacy beliefs among Hispanic youth living in a large, metropolitan area in the United States. Almost all of youth in the study sample live in poor, inner-city neighborhoods. While findings from this study may be extrapolated to similar groups of people, it would be inappropriate to generalize them to other populations until empirically tested. In particular, caution should be exercised in generalizing findings to African-American youth living in inner-cities, because the influence of Latino culture among the study population cannot be dismissed, even though the vast majority of the participants (96%) were born in the United States and thus are fairly acculturated into mainstream American culture. In addition, other factors associated with race, such as racism, are likely to have differential impact across ethnic groups.

Implications of Findings

Applicability of Bandura's Model

The present study applies Bandura's model of efficacy development to children's self-efficacy beliefs about future educational and occupational attainment. This model has been

applied previously, for the most part, to simple behaviors such as the handling of snakes by phobics. The present study draws upon three of the four primary predictors of self-efficacy as conceptualized by Bandura: previous performance, vicarious experience, and social persuasion (Bandura, 1982). While previous studies have shown that previous performance is the strongest influence out of the three predictors and social persuasion the weakest, the present study found social persuasion to be as strong a predictor as previous performance. Furthermore, vicarious experience was not a significant predictor in the present study.

These differences appear to stem from the nature of the behavior of interest as well as the population under study. First, because future educational and occupational attainment are actually the culmination of a set of behaviors such as studying hard and getting good grades, they may be too complex to emulate easily. Thus, social messages from significant others may become more important in influencing children's judgment about their self-efficacy. Second, in terms of academic ambition, it has been shown that modeling is more effective for higher-SES children (Cohen, 1983). This is consistent with results from the present study, which targeted lower-SES Hispanic children.

The present study demonstrates that Bandura's theory provides a useful framework for the study of children's self-efficacy beliefs about future educational and occupational

attainment. Thus, it appears relevant to the study of more complex behaviors as well as simple units of behavior. It should be noted that Bandura's theory is intended to predict self-efficacy beliefs and not actual behavior. Actual behavior has been shown to be influenced by self-efficacy beliefs (Bandura & Adams, 1977; Bandura, 1982), but is also influenced by values. For the prediction of actual behavior, such as the pursuit of educational and occupational attainment, models such as expectancy-value theory (Feather, 1992) and the theory of reasoned action (Fishbein & Azjen, 1975) have been developed.

Self-Efficacy of Inner-City Children

The present study focuses on the proximal and distal predictors of self-efficacy beliefs among Hispanic children growing up in the inner-city. Of the proximal predictors, social persuasion contributed most strongly to self-efficacy beliefs about future educational and occupational attainment. This finding implies that inner-city children need encouragement, both implicit and explicit, to develop and maintain a sense of their own effectiveness. Such encouragement seems especially important in light of the poverty and violence that surround their lives.

Previous successful performance is also important, and thus opportunities and contexts for the realization of success are needed in inner-city communities. Because successful participation--as opposed to participation alone--seems

critical, parents, schools, and communities should seek to promote the experience of success in the planning of activities, programs, and resources.

Furthermore, taking part in extra-curricular activities appears to be important to children's psychological adjustment, as participation was found to be significantly related to global self-worth. Thus the present study joins previous research demonstrating the psychological benefits of participation across different populations (eg. Zimmerman & Rappaport, 1988), and suggests that participation, as a positive influence on global self-worth and as a necessary precursor to the experience of success, may be an ideal fulcrum for community interventions. To illustrate, the provision of opportunities for participation, such as the "manning" intervention which provided a high ratio of roles to people in an effort to expand opportunities for participation (Barker, 1964), can lead to successful performance and higher self-efficacy.

Whether or not the provision of neighborhood resources, such as after-school programs, recreation centers, and academic tutoring, can lead to greater participation is still open to debate. The present study found that perceived resource level influences participation, but was equivocal about the influence of actual resource level. Two implications emerge from the findings: first, the relationship between neighborhood resources and participation appear to be

mediated by other factors that were unmeasured in the study. Possible factors include parental values, acculturation, and family income, all of which may impinge on the decision to participate providing that resources are available. Second, the type of activity may be important, in that the provision of certain resources may influence participation more so than others.

The findings in this study, therefore, are encouraging for the development and maintenance of self-efficacy beliefs among poor, urban children. Interventions that emphasize the communication of positive messages, programs that provide opportunities for success, and the provision of resources in the neighborhood may all potentially lead to higher self-efficacy beliefs regarding future educational and occupational attainment among urban inner-city children. And as self-efficacy beliefs have been shown to predict future behavior (Bandura, 1982), these findings also suggest that influencing future action--that is, the actual pursuit of education and employment--is possible.

Research on the Urban Poor

The present study can be placed conceptually in the context of research on the problems of the urban poor. As problems in inner-city neighborhoods have become visibly alarming, research on the urban "underclass", as the poorest group of the poor has been called, has proliferated in recent years (eg. Wilson, 1991; Jencks, 1989). The current discourse

on alleviating the problems of this population hinges, in some respects, upon whether we believe the root of these problems to lie in bad choices, low expectations, or an invidious culture. As conceptualized by Ellwood (1989), these three explanations--poor choices, low expectations, and a weak culture--currently vie for prominence as the best model to explain the behavior of the poor. However, if we view each as components of a more comprehensive model rather than as competing models, we would have a developmental model in which expectancies play a large part. That is, as children, we develop high or low self-efficacy beliefs, then view our choices as adults through this cognitive frame. Thus, the question of how self-efficacy is developed in inner-city children is an important one, and has a place in the overall discourse about the problems of and solutions for the urban poor. This study suggests that social capital (Bourdieu, 1991), in the form of parents, teachers, and peers who communicate positive expectations and community institutions that provide opportunites for successful participation, is critical to the development of self-efficacy.

APPENDIX

AGREEMENT TO PARTICIPATE IN

Determinants of Self-Efficacy Beliefs: A Study of Efficacy Development in Community Context

Dorothy Chin, M.A.
Department of Psychology
University of Hawaii
Honolulu, HI 96822

Dear Parent or Guardian,

I am a researcher at the University of Hawaii, and want to learn more about children and what they think about their futures. Mr. Gerst, the principal of Robert Hill Lane School, has given me permission to do a survey at the school. The survey will ask the students about their hopes and expectations for the future, what they think of themselves, and what they think of their neighborhoods. It will be conducted at school, and will take about one hour. In addition, teachers will be asked to provide ratings on how the students are doing. The identity and responses of the students will be confidential, which means that no one except me will know what the students say, not even the school or the teachers. There is no chance of the participants being publicly identified. Participation is completely voluntary; whether or not your child participates, his or her grades or standing in school will not be affected in any way. If you are willing to have your child participate in the survey, please sign your name below the "YES" statement at the bottom. If you do not want your child to participate, sign your name below the "NO" statement on the back. In either case, please have your child return this form to school. Thank you!

YES, I have read and I understand the above, and I have been given satisfactory answers to my questions concerning project procedures, and I understand that I am free to withdraw my consent and to discontinue participation in the project at any time.

I give consent for my minor child to participate in the survey with the understanding that such consent does not waive any of my legal rights, nor does it release the principal investigator from any liability for negligence.

_____ (Name of student)

_____ Parent

_____ Date

NO, I do not give consent for my child to participate in the survey.

_____ _____
(Name of student) Parent

_____
Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this study, contact: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, Hawaii 96822. Phone: (808) 956-8658.)

ACUERDO DE PARTICIPACION

Determinantes sobre la creencia de la validez del individuo: Estudio sobre el desarollo de la validez del individuo en un contexto comunitario

Dorothy Chin, M.A.
Departament of Psychology
University of Hawaii
Honolulu, Hawaii 96822

Estimado padre/madre/tutor,

Soy una investigadora de la Universidad de Hawaii y quiero aprender mas acerca de como los ninos piensan de su futuro. El Sr. Gerst, director de Robert Hill Lane School, me ha dado permiso para conducir una encuesta en la escuela. La encuesta pregunta a los estudiantes acerca de las aspiraciones y experanzas que ellos tienen del futuro, lo que ellos piensan de si mismos, y lo que piensan de sus vecindarios. La encuesta dura una hora y va a ser echa en la escuela. Tambien, se les va a pedir a los profesores que evaluen el progreso de los ninos. La identidad y las respuestas de los estudiantes son confidenciales. Esto significa que nadie mas que yo sabe lo que los ninos contestan. Nadie mas lo sabe, ni siquiera los profesores. No hay ningun riesgo que el nombre de su hijo sea publicado. La participacion en este proyecto es completamente voluntaria. El que su hijo participe o no, no le va a afectar ni en sus notas ni en su nivel en la escuela. Si usted esta de acuerdo en que su hijo participe en la encuesta, por favor firme mas abajo donde sale la palabra "SI". Si usted desea que su hijo no participe, firme en la pagina siguiente donde dice "NO". En ambos casos, por favor haga que su hijo devuelva esta encuesta a su escuela.
Muchas Gracias!

SI, he leido y he entendido esta nota, y estoy satisfecho con las respuestas que me han dado de los procedimientos del proyecto. Entiendo que en qualquier momento puedo retirar mi permiso y terminar mi participacion en el proyecto.

Doy permiso para que mi hijo participe en la encuesta con el entendimiento que este permiso no me quita ninguno de mis derechos civiles y que no libera al investigador principal de su responsibilidad en caso de negligencia.

_____ _____
(Nombre del estudiante) Padre/madre/tutor

_____
Fecha

NO, no permito a mi hijo participar en esta encuesta

_____ _____
(Nombre del estudiante) Padre/madre/tutor

_____
Fecha

(Si usted no esta satisfecha con las respuestas a sus preguntas o si usted tiene una queja de como la trataron, comuniquese con: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, Hawaii 96822. Phone: (808) 956-8658.)

Subject ID _____

Site _____

Dear Student,

I am conducting a study to find out more about kids like you, about what your life is like and what you think about your future. You don't have to participate in this study if you don't want to, but if you do, I would like you to answer the questions honestly. Your answers are confidential, which means that no one will know what you said--not even your parents or your teacher. The questionnaires will take about 4 hours to fill out, and you can quit at any time if you wish.

If you wish to participate in this study, please sign your name below. By signing, you are stating that you understand what I have said so far, and that you are willing to participate.

_____

I have read and I understand the above, and I have been given satisfactory answers to my questions, and I understand that I can stop my participation at anytime if I so wish. I give my consent to participate in the study.

_____ _____
Student Date

_____
Student Name (Print)

Subject ID _____

Site _____

Now, please follow along as I read the questions out loud. Then, mark your answers according to your opinion. This is not a test, so there are no right or wrong answers. I want to know what you think. If you have a question, raise your hand and I will come around to help you. Please don't say your answers out loud, just mark it on your paper.

Instructions: I would like to find out a little about what kids like you think about your future. I will read each question out loud, please follow along by reading the question to yourself. When I am done, circle one of the choices below the question, according to what you think. Circle "very true" if you REALLY think the statement is true; if you think it is sort of true but not really true, circle "sort of true". If you think it's not true, but not REALLY untrue, circle "not very true". If you think it's REALLY untrue, circle "not true at all".

I will be disappointed if I don't go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

It is up to me whether or not I go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

People like me can't make it into college.

1. very true
2. sort of true
3. not very true
4. not true at all

I will probably go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

Other people can go to college, but not me.

1. very true
2. sort of true
3. not very true
4. not true at all

I will have a good life when I grow up.

1. very true
2. sort of true
3. not very true
4. not true at all

Education is very important to me.

1. very true
2. sort of true
3. not very true
4. not true at all

What would it take for you to go to college?

_____

_____

I am hard-working enough to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

I am smart enough to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

I will have the right grades to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

I will have the money to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

I will know what to do to get into college.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I work hard enough, I still will not be able to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I am smart enough, I still will not be able to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I have the right grades, I still will not be able to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I have the money, I still will not be able to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I know what to do, I still will not be able to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

What job do you expect to have when you grow up?

_____

What job do you want when you grow up?

_____

I will probably get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

People like me can't get that job.

1. very true
2. sort of true
3. not very true
4. not true at all

I will be disappointed if I don't get that job.

1. very true
2. sort of true
3. not very true
4. not true at all

It is up to me whether or not I get that job.

1. very true
2. sort of true
3. not very true
4. not true at all

What would it take for you to get the job you want?

_____

_____

I am hard-working enough to get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

I will have the education I need to get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

I will know what to do to get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

I will know the right people to get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I am smart enough, I still will not get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I just work hard enough, I still will not get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I just have the right education, I still will not get the job I want.

1. very true
2. sort of true
3. not very true
4. not true at all

Even if I know what to do, I still will not get the job I want.

1. very true
2. sort of true
3. not true
4. not true at all

Even if I know the right people, I still will not get the job I want.

1. very true
2. sort of true
3. not true
4. not true at all

Education is very important to my parents.

1. very true
2. sort of true
3. not very true
4. not true at all

My family expects me to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

My teacher expects me to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

The kids I know expect to go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

My parents worry about having enough money to send me to college.

1. very true
2. sort of true
3. not very true
4. not true at all

My parents think that people like us can't go to college.

1. very true
2. sort of true
3. not very true
4. not true at all

My family expects me to get a good job.

1. very true
2. sort of true
3. not very true
4. not true at all

My teacher expects me to get a good job.

1. very true
2. sort of true
3. not very true
4. not true at all

The kids I know expect to get a good job.

1. very true
2. sort of true
3. not very true
4. not true at all

My parents think that it's hard for people like us to get a good job.

1. very true
2. sort of true
3. not very true
4. not true at all

Did your father go to college?

1. yes
2. no
3. don't know

Did your mother go to college?

1. yes
2. no
3. don't know

Do you have a brother or sister who went to college or is in college now?

1. yes
2. no

Do you have a relative (cousin, aunt, uncle, etc.) who went to college or is in college now?

1. yes
2. no

Do you know anyone who went to college?

1. yes
2. no

What type of job does your father have?

_____

What type of job does your mother have?

_____

Do you have a brother or sister who works?

1. yes
2. no

If yes, what type of job does he/she have?

_____

Who are the people you look up to?

_____

Who do you want to be like when you grow up?

_____

Please list all the people who live at home with you, and how they are related to you (for example, brother, grandmother, etc.).

_____

_____

_____

_____

_____

_____

Now I would like to find out more about the neighborhood you live in. Again, I will read each question, and when I'm done, please circle "very true" if you REALLY think the statement is true; if you think it is sort of true but not really true, circle "sort of true". If you think it's not true, but not REALLY untrue, circle "not very true". If you think it's REALLY untrue, circle "not true at all".

In my neighborhood, there are parks and playgrounds to play in.

1. very true
2. sort of true
3. not very true
4. not true at all

There are no places to hang out near where I live.

1. very true
2. sort of true
3. not very true
4. not true at all

There are libraries in my neighborhood.

1. very true
2. sort of true
3. not very true
4. not true at all

If I want to play sports, I can find a place to go in my neighborhood.

1. very true
2. sort of true
3. not very true
4. not true at all

I wish there were more things to do in my neighborhood.

1. very true
2. sort of true
3. not very true
4. not true at all

I get scared sometimes when I walk around in my neighborhood.

1. very true
2. sort of true
3. not true
4. not true at all

My neighborhood is safe.

1. very true
2. sort of true
3. not very true
4. not true at all

I sometimes hear gunshots near my house.

1. very true
2. sort of true
3. not very true
4. not true at all

There are no gangs in my neighborhood.

1. very true
2. sort of true
3. not very true
4. not true at all

There are homeless people around near where I live.

1. very true
2. sort of true
3. not very true
4. not true at all

When I grow up, I want to live in the same neighborhood I live in now.

1. very true
2. sort of true
3. not very true
4. not true at all

Now I would like to know more about the activities that you participate in outside of school. On the chart below, there is a list of different activities that some kids might participate in. For each activity, make a checkmark under "very often" if you participate in that activity very often, under "sometimes" if you participate in it sometimes, under "not much" if you don't participate very often, and under "never" if you don't participate in that activity at all.

	very often	sometimes	not much	never
How often do you go to church?				
How often do you go to the library outside of school?				
How often do you participate in after-school tutoring program (like at the "Y", etc.)?				
How often do you take music lessons (like piano, guitar, etc.)?				
How often do you take dance lessons?				
How often do you participate in a sports league outside of school (like Little League, Soccer)				
How often do you go to a Boys Club, Girls Club, or the "Y"?				
How often do you play on the streets in your neighborhood?				
How often do you attend summer camp?				

	very often	sometimes	not much	never
How often do you participate in Boy Scouts (if you are a boy) or Girl Scouts (if you are a girl)?				
How often do you go to a park or playground outside of school?				
How often do you work for money (like a part-time job)?				
How often do you watch T.V.?				
How often do you participate in Big Brothers or Big Sisters?				
How often do you participate in a youth gang?				

Are there any other activities you participate in that aren't listed above? If so, please write them down below.

_____

What do you usually do after school?

_____

What do you think this survey is trying to find out? _____

Do you have any comments about the questions you answered? If yes, write them below.

_____

THANK YOU VERY MUCH !

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