

## Research Reports

# Predictors of Social and Educational Mobility in Mexican Recipients of a Governmental Welfare Program: A Psychosocial Approach

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## Abstract

The aim of this study is to identify the factors predicting social and educational mobility in persons living in extreme poverty in Mexico by analyzing a broad set of personal, familial, educational and social variables. A total of 913 adults were interviewed, 65.2 percent of whom were women, with an average age of 43.71 years. A regression analysis has identified depression, religiosity, locus of control, verbal skills, social support, and age as predictors of intra-generational social mobility, while parents' educational attainment and parenting style as well as individuals' intelligence, school grades, time spent on homework, and age predicted inter-generational educational mobility. The results are discussed in terms of their implications for this segment of the population.

**Keywords:** poverty, social mobility, educational mobility, psychological resources, resilience, social support

Europe's Journal of Psychology, 2012, Vol. 8(3), 402–422, doi:10.5964/ejop.v8i3.447

Received: 2012-05-03. Accepted: 2012-07-10. Published: 2012-08-29.

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Mexico can be regarded as a middle-income country in Latin America. However, the economic figures for 2009 show a 28 percent decline in the per capita Gross Domestic Product (GDP) in relation to the previous year, a drop that had not been observed since 1995, according to data from the National Institute of Statistics and Geography, INEGI (Ordaz, 2007). A similar phenomenon occurs in other Latin American countries such as Paraguay, Venezuela, Honduras and Bolivia. This provides fertile ground for a significant increase in poverty indicators. At the same time, according to the Inter-American Development Bank, IADB, on the basis of Mexico's income distribution, economic structure and political map, it is practically two different countries. The north of the country accounts for 85 percent of the wealth produced, with 38 percent of the population living below the poverty line, whereas the south produces less than 15 percent of the wealth and has 56 percent living in poverty (Inter-American Development Bank, 2009). This makes Mexico a highly unequal country, and is similar to what happens in European countries like Spain and Italy.

In the broadest sense, poverty is defined as a condition in which a person has a low or no income, difficulty gaining access to the goods and services provided by the state (such as social security and health, among others), does not own property or any other type of assets, has no or low educational attainment or training and does not have enough free time for educational or recreational activities or rest, which leads to a lack of autonomy and non-existent or limited family and social networks (Arriagada, 2005). In Mexico there are no measurements corresponding to a poverty line based exclusively on income; instead, the National Council for the Evaluation of Social Development Policy (CONEVAL) in Mexico defines three types of poverty: asset poverty (lacking the resources to obtain housing,

clothing, and transport, among other things), skills poverty (lacking resources for health and education) and food poverty (total per capita monthly income of less than 949 Mexican pesos in urban areas and 707 pesos in the rural area). CONEVAL recently reported that asset poverty, skills poverty, and food poverty rose to 47.4 percent, 25.1 percent and 18.2 percent, respectively, between 2006 and 2008 ([National Council for the Evaluation of Social Development Policy, 2009](#)). This may be due to a lack of labor opportunities and poor administration of public resources, among other reasons.

Overcoming poverty is therefore a pressing problem, together with reducing inequality in access to services, particularly in view of the progressive reduction of economic growth and the high degree of international financial instability. Overcoming poverty implies social mobility. The absence of social mobility generally leads to inter-generational poverty, which occurs when children born into families with poor parents do not improve their economic status during adulthood to a significant and persistent enough degree to allow them to escape from poverty for the rest of their lives ([Aldaz-Carroll & Morán, 2001](#)).

The purpose of this study is to determine the psychosocial factors that can predict social mobility in persons living in conditions of extreme poverty. It also seeks, separately, to identify the possible psychosocial predictors of educational mobility. In addition, it is important to clarify that this study is not aimed at evaluating the degree to which educational mobility predicts social mobility.

## Social Mobility

Social mobility is a process whereby social actors, individuals and groups shift from one position to another within set times and spaces, according to the variables constituting the social structure ([Sánchez, 2009](#)). In general, social mobility is defined as the way in which persons or social groups increase or decrease their status or position from one class to another within the social hierarchy. Two key elements of social mobility are intensity and generality. Intensity is defined as vertical social distance, in other words, the number of layers an individual moves up or down. Conversely, generality refers to the number of individuals who change their social position in a vertical direction within a set period ([Orihuela, 2005](#)). Also, inter-generational mobility is the difference in status achieved between parents and offspring, or between generations, while intra-generational mobility refers to the difference in status achieved by the same individual or group over a period of time. In relation to inter-generational mobility, the term *status of origin* is used to refer to the parents' economic, educational or social conditions, while *status of destination* is used to refer to the offspring's conditions, and thus mobility can be measured by comparing the *status of origin* and *status of destination*.

Social mobility is usually considered in terms of displacement between social classes or occupational groups. The IADB stressed, however, that although social class can provide a good general approximation of social mobility, it should not be reduced to this, since social class definitions may lack precision and lend themselves to perceptual biases ([Inter-American Development Bank, 2008](#)). It is therefore recommended that objective indicators such as educational attainment, income and occupation, to mention a few, be incorporated into the measurement of social mobility. Surveys like the National Survey of Household Income and Expenses (ENIGH), undertaken by the National Institute of Statistics and Geography (INEGI), and the National Survey on Households' Living Standards (ENNVIH), conducted by the Iberoamerican University and the Center of Research and Teaching on Economics (CIDE), are examples of the efforts to use more objective indicators to measure social mobility.

Social mobility in Mexico has been studied through poverty reduction, labor mobility and educational mobility. A recent study showed that the significant poverty reduction experienced between 1950 and 1980 ceased in the early 1980s, increased sharply after the 1995 crisis and has remained constant ever since (Torche, 2008). A comparison of social mobility in Mexico with that of countries such as Chile, the United States and Sweden showed that Mexico has greater inter-generational poverty reproduction: Long downward mobility (from the richest down to the poorest quintile) is virtually non-existent in Mexico, while long upward mobility (ranging from the poorest to the richest quintile) is also scarce, making Mexico a highly unequal country. There is, however, some mobility in the middle: approximately 26% of those in the poorest quintile move to the second quintile, 22% move to the third and fourth quintiles, and only 4% reach the wealthiest quintile (Fundación ESRU, 2008).

On the other hand, in a comparison of labor mobility patterns over the past three decades, Cortés and Escobar (2005) showed that, since 1988, Mexico has seen a considerable reduction in the opportunities to move up a class or to remain in the same class across all occupational strata, as well as a steady decline in labor opportunities since 1988. Paradoxically, in a society in which women's participation in the labor force is less than men's, women have experienced a substantial improvement in opportunities, followed by a significant drop, yet less so than in the case of men (Cortés & Escobar, 2005). This does not mean that the disparity in labor participation between men and women has disappeared, and rather, the authors attribute this increase in women's participation to the fact that the female labor force is less expensive. Currently, the differentiation between "male" and "female" occupations has become less clear, probably because women now have higher educational levels. Examples of occupations that used to be typically female and are now also performed by men are cooks, hair stylists and nurses, to mention a few. And in the opposite case, that is, women performing occupations that were typically filled by men, two examples are police officers and business executives. The female labor force is less expensive since women accept lower wages for the same type of job.

Social mobility is closely associated with educational achievement, since higher education makes better wages possible. Consequently, another way to study social mobility is through educational mobility. According to Ordaz (2007), one of the factors that can drive social mobility is education, and thus even completing elementary education or better still, completing junior high education, makes a person less likely to suffer from food, skills or asset poverty. Inter-generational comparisons showed that most Mexican adults have more education than their parents. Specifically, 68 percent of Mexicans aged 30 to 64 have higher educational attainment, 27 percent have the same level and only 5 percent have less. According to the last census in 2010, 37.12 percent of the population with six years of age or more completed elementary school, 12.28 percent completed college, and approximately 1 percent has studied at the graduate level. The large part of the population falls between junior high and senior high school in their level of education. The average education of the population of 15 years of age or more in 2010 was 8.6 years, i.e., junior high (National Institute of Statistics and Geography, 2011).

Although the proportion of individuals with extremely low educational attainment is declining, there is still a strong link between origin and educational destination. The relative likelihood of gaining access to higher education for different categories of social origin varies from 2 percent for those with parents with no schooling, to 70 percent for those with parents with higher education (Fundación ESRU, 2008). Comparatively speaking, inter-generational educational mobility is lower than in the United States but relatively high compared with other Latin American countries (Behrman, Gaviria, & Székely, 2001). This could be because educational services have become increasingly available in Mexico during the last 50 years, and as a result, new generations are achieving higher levels of schooling.

An analysis of the 1998 Retrospective Demographic Survey concludes that the educational expansion (understood as the increase in the population's educational level as a result of public spending) that occurred during the so-called neoliberal transformation of the 1980s was not paralleled by an increase in labor opportunities. This means that intra-generational mobility towards better jobs and downward mobility increased, even for those with high educational attainment (Parrado, 2005). This has been compounded by the fact that poverty, i.e., shortage of family income, forces children and teenagers of both sexes to obtain jobs that are largely characterized by precariousness, instability and low wages. Moreover, these children and youth end up dropping out of school, ultimately reducing their opportunities for achieving upward social mobility as adults (Piedra, 2007).

The recent available data on social mobility in Mexico, whether in the form of poverty reduction, or labor or educational mobility, suggest that it is stagnant. This situation is worrisome, considering that the literature suggests that social mobility increases the efficiency of society, social integration within the latter and social equity; while, on the other hand, an immobile society that fails to provide opportunities for persons from low socio-economic strata will not optimize the use of human resources or use all the available talent, thereby achieving a poor balance among its inhabitants (Torche, 2008). In other words, the lack of mobility reduces social legitimacy and integration, perpetuates the unfair and undesirable influence of social origin in individual well-being and may therefore cause social conflict. It is thus important to study the factors that facilitate mobility.

In this study, positive social mobility was considered to be poverty reduction, as measured in terms of individuals' living conditions such as housing and available resources, during a period of time, or in other words, in intra-generational terms. Since previous research has identified education as an important factor in poverty reduction, we analyzed inter-generational mobility, defined as the difference between parent and offspring education, considered separately.

Unlike other studies focused on the effects of socio-economic variables, such as unemployment, inflation and public spending on social mobility, the present study focused on the predictive power of psychosocial variables. Certain individual characteristics, such as intelligence, achievement motivation, self-control, optimism, sense of humor, locus of control, and strategies for resolving problems and coping with stress, are considered to potentially facilitate social mobility, and thus the variables that have been empirically associated with these concepts were analyzed. In addition, it is predicted that educational mobility is determined by family and school conditions during childhood. Consequently, the present study focused on the relative importance of parental styles in the family of origin, as well as factors associated with educational processes and school infrastructure, in predicting educational mobility.

Regarding the effect from the country's structural mobility on the intra-generational mobility under study, it is important to consider the following aspects. This study focused on personal characteristics that affect individual mobility, not the country's structural mobility. This study did not analyze the general population, but rather only one segment of the population, specifically those living in extreme poverty. All the participants in the study have in common the characteristic of being extremely poor when the initial measurement is taken. A second measurement was taken three years later in order to observe social mobility. The country's structural mobility is considered to affect all participants in a similar manner, and thus differences among the participants were attributed to their individual characteristics. In the case of inter-generational educational mobility, structural mobility was expected to have a greater influence, since younger generations have better educational opportunities.

### Psychosocial Variables Associated With Mobility

For some authors, social mobility is related to individuals working harder, longer or more efficiently than others, although this effort may be affected by other factors such as those linked to the measurements and perceptions of the observers themselves (Márquez, Chong, Duryea, & Ñopo, 2008). It is therefore important to determine which variables are related to the extraordinary effort that drives mobility.

Within the psychosocial variables affecting social mobility, the positive effect of intelligence appears to be the same across the entire range of classes of origin and the entire scale of classes achieved. Nettle (2003) found that intelligence was the strongest factor that has been identified as the reason behind class mobility in contemporary societies. Nevertheless, the concept of intelligence is controversial. The debate on how to define intelligence began in the early years of the last century, and it continues today without any agreement reached. Discussion of this matter is extensive and certainly beyond the scope of this article, however interested readers may consult the literature focusing on this topic.

With respect to evaluating intelligence, most verbal measurements of intelligence are based on knowledge acquired through schooling, even though intelligence is not determined exclusively through schooling. In contrast, non-verbal measurements evaluate diverse facets of non-verbal intelligence, such as the processing of visual information, the speed of processing, spatial and non-verbal reasoning, and aspects of fluid intelligence (Kellogg & Morton, 2003). For this reason, and because individuals living in extreme poverty have very limited schooling, intelligence was measured in this study through a non-verbal standardized test, the Beta III test (Kellogg & Morton, 2003).

The personality trait associated with the search for excellence is achievement motivation. The need for achievement can be defined as the desire and tendency to do things rapidly and to do the best possible, to better oneself, to surpass others, and to improve one's self-concept by the successful use of one's talent (Deckers, 2009). According to Revelle, Wilt, and Rosenthal (2010), the behavior of individuals who seek mastery is based on their own needs, and not on external demands; they attribute their success to their abilities; they demonstrate a greater degree of self-awareness; they tend toward self-actualization and ego development; their goals are learning-oriented; and they have great confidence in their own abilities and intelligence.

Another important trait is self-control, which refers to one's capacity to ignore or inhibit impulses that are socially undesirable or unacceptable, and to modify and regulate one's own behavior, thoughts and emotions (Finkenauer, Engels, & Baumeister, 2005) in a way that involves conscious efforts to avoid or postpone certain behaviors. Individuals with low self-control do not necessarily deviate from the norm, but simply have a stronger tendency toward risky behaviors.

In addition, some research has shown that having an optimistic disposition is a strong predictor of successful adjustment to stressful situations and is related to positive adaptation (Ben-Zur, Rappaport, Ammar, & Uretzky, 2000). One type of optimism is known as *dispositional optimism*, i.e., a disposition that encompasses expectations of generally positive results. When an individual has a positive disposition regarding the expectation of the fulfillment of his objectives, this boosts his motivation in terms of the amount of effort used to achieve them (Ben-Zur, 2003).

A characteristic that is associated with optimism is a sense of humor, something that allows individuals to appreciate, create, and use humor in a vital way in their daily activities. A sense of humor has long been considered as a mechanism for confronting life's problems. Humor can be used in coping, and at the same time, it contributes to

enhancing both physical and psychological well-being (Kuiper, Grimshaw, Leite, & Kirsch, 2004). It is also a self-protection and adaptation tool.

At the same time, locus of control and coping strategies are useful tools for individuals' adaptation (Leontopoulou, 2006). In this respect, having an internal locus of control is linked to better coping skills, since individuals are certain they are making use of their own abilities (Núñez Chávez, 2003). An internal locus of control is also related to high efficiency, since individuals engage in problem-solving tasks as a means of increasing their opportunities of achieving goals and the possibilities of achieving a better standard of living (Salas-Auvert, 2008).

The term *resolving social problems* refers to a self-directed, cognitive-behavioral process in which the person attempts to discover adaptive solutions to situations confronted in daily life, including interpersonal, family, community, labor and economic problems (Vera-Villaruel & Guerrero, 2003). This resolution model is composed of a motivating element referred to as problem-oriented and also specific abilities and skills, including the definition and formulation of a problem, generation of alternatives for a solution, decision-making, implementation and verification (Vera-Villaruel & Guerrero, 2003). On the other hand, worrying too much about problems may be associated with believing that difficulties cannot be resolved and negatively assessing one's abilities for resolving problems (Belzer, D'Zurilla, & Maydeu-Olivares, 2002). Excessive worrying also prevents a positive orientation toward problems. Thus, factors such as a lack of money, poorly remunerated employment and a less than promising future lead to a negative orientation toward problems, and consequently, to solutions that are less adaptive and less efficient.

Accordingly, it has been found that the main causes of the lack of social mobility in extremely poor populations are, on the one hand, victimization, since this limits the hope of success in the future, and on the other hand, an external locus of control. This tends to reinforce the idea that external factors influence the circumstances one lives in and encourages resignation (Palomar-Lever, 2005). Thus, those who believe that social mobility depends on their personal efforts and skills are more likely to experience upward vertical social mobility than those that attribute it to the social setting in which they live (Palomar-Lever, 2006). The fact that the use of passive, emotional and evasive strategies for coping with stress are more common among persons living in conditions of poverty further reduces their outlook for success (Palomar-Lever & Lanzagorta, 2005).

Other psychological variables that may have an effect on social mobility are emotional intelligence, depression, stress and religiosity, as well as factors in social and family environments. Emotional intelligence involves processing that includes an assessment of one's emotions and those of others, and their appropriate expression and adaptive regulation, and promotes intellectual and emotional growth (Salovey, Woolery, & Mayer, 2001). Some studies have pointed to predictive relationships between emotional intelligence and indicators of psychological well-being, life satisfaction and mental health (Ciarrochi, Chan, & Caputi, 2000).

For poor individuals, chronic stressors (such as serious financial difficulties, crowded housing, marital problems, continuous unemployment, mental illness in the family, and discrimination, to mention a few) represent situations that are constantly demanding and difficult to resolve, and this frequently generates high levels of depression and anxiety (Willner, 2002). Although depression is not exclusive to marginalized classes, when individuals feel poor or are poor, they are more susceptible to experiencing depressive disorders. This is because when individuals are poor, they are more likely to have fewer psychological resources for overcoming obstacles, and not only does this hinder moving up the social scale, but it can also lead to moving down the social scale (Palomar-Lever, 2006). Szabó (2011) found that stress contributes to depression and anxiety, and the latter in turn generate stress,

thereby creating a vicious circle that is difficult to break. Lastly, the situation of vulnerability generated by poverty can be identified as a risk factor that predisposes individuals to disorders involving stress, anxiety and depression.

Some research showed that there is an increase in the religious participation of persons undergoing a difficult event and that on the basis of this, they achieve emotional growth, prosper and find benefits, thereby producing a positive adjustment. Thus, religiosity may increase the meaning of life, adaptation to difficulties and having a structured belief system (Shaw, Joseph, & Linley, 2005). However, another study reported that for many individuals from low socio-economic strata in Mexico, poverty is perceived as part of a divine plan beyond their control (García & Corral-Verdugo, 2010; Székely, 1995). It is essential to determine whether religiosity acts as a factor that promotes social mobility or in fact hampers it.

Social groups use collaborative strategies that enable them to promote strength through a sense of collectivity or connectivity provided by everyday patterns of coexistence, which could be tools for encouraging upward social mobility (Landau, 2005). In this respect, social groups might be expected to be a source of support and assistance.

The environment in which a child grows up is also a very important factor, since an inadequate parenting style, the loss of family ties, poverty and other adversities all tend to compromise effective socialization, and may lead to limited self-control (De Li, 2005). Many of the reactions of parents living in poverty have a significant impact on their children's quality of life. There is a risk that parents react to stress in their environment by demanding constant obedience, placing their trust in physical punishment, denying affection and failing to respond to children's needs. It is important to recognize the parenting practices immersed in these parenting styles, to then examine how the interaction between parents and offspring determine the development of children and adolescents. Three basic strategies of parental control that are qualitatively different have been proposed: democratic, authoritarian and permissive strategies (McGinn, Cukor, & Sanderson, 2005). An authoritative style is positively correlated with appropriate cognitive and social functioning, high academic achievement, and high self-esteem and social competence, in comparison with individuals who come from authoritarian, neglecting families (Zhou, Eisenberg, Wang, & Reier, 2004).

In short, the mechanism that is assumed to underlie individual variables associated with social mobility means that adequate self-esteem and an appropriate self-concept usually act as protective factors, since they strengthen the expectations of self-efficacy in coping with various situations, which affects the motivation to achieve, reducing the tendency towards fatalism and avoiding problems. Ultimately, upward social mobility depends largely on solving everyday problems effectively. It would also be useful to determine the extent to which other variables such as a sense of humor and self-regulation affect social mobility, through their link with self-concept and problem solving. Stress and depression, on the other hand, are cognitive and affective disturbances that hinder and even paralyze an individual's efforts to resolve problems, making it important to consider the effect of such disturbances on social mobility.

### **Factors Predicting Educational Mobility**

When factors associated with educational mobility are studied, it is necessary to explore the elements associated with "school backwardness" and school desertion, since these two variables are those preventing students from remaining in the educational system. In the Mexican school system, students are required to repeat a school year, if they do not pass the first time. In this context, school backwardness means that a child has not accomplished his or her education in the expected time, due to repeating school years.

When, to the contrary, the conditions generated by school backwardness and school desertion are not present, students continue to advance through the school system and reach higher levels of educational attainment. According to some studies (e.g., [Muñoz, 2009](#)), the educational attainment of the father, mother and brothers/sisters explains to a significant degree the academic performance of students, and their continuation in the school system. According to [Muñoz \(2009\)](#), the educational attainment of the mother and brothers/sisters has a greater impact than the father's educational attainment for students in rural schools. In contrast, the educational attainment of both parents has the same importance for students in urban schools. Greater educational attainment on the part of parents favors the development of personality characteristics and attitudes that assist students in their own educational development, especially intellectual development. Children's intelligence is strongly determined by socioeconomic background and family environment, since it is determined to a significant degree by the nutritional status of these children. Low nutritional levels and intellectual limitations in children will hinder their progress in school.

School factors that have an impact on school achievement and work in favor of educational mobility include the quantity and quality of teacher interactions with students associated with basic pedagogic activities (correcting homework, reviewing and correcting exercises, conducting activities that stimulate children's participation, and evaluating children's abilities, skills and knowledge). Some authors have been able to establish that children who live in low-economic contexts can confront situations of extreme adversity, and teachers can help them to establish appropriate relationships and affective bonds with others. This is particularly relevant when parental models are inadequate, since teachers can help students to resolve conflicts and compensate for deficiencies, and can provide the necessary support, including strategies for survival and for overcoming difficulties ([Namo de Mello, 2005](#)). [Seccombe \(2002\)](#) explained that children benefit from their relationships with teachers when they are able to establish positive relationships with them, and when teachers serve as models, friends or confidants, providing a source of support for children ([Dass-Brailsford, 2005](#); [Silas Casillas, 2008](#)).

Lastly, it is important to point out that school desertion occurs after diverse situations of school backwardness have already presented themselves. School backwardness is a phenomenon that finds fertile ground when students confront disadvantageous family, adverse personal and undesirable school factors. In fact extreme poverty is a breeding ground for these types of factors to come together, and the probabilities of school failure are enormously greater. Consequently, when children or youth from low socioeconomic levels manage to achieve educational mobility and surpass their parents' educational attainment, it can be assumed that their efforts to achieve this have also been enormous.

The purpose of this study was to determine the psychosocial factors that can predict social mobility and educational mobility in persons living in conditions of extreme poverty. To this end, a survey was conducted of the beneficiaries of the *Oportunidades* program.

*Oportunidades* is the government program for alleviating poverty, the mission of which is to help families living in extreme poverty to emerge from this situation, by providing direct support for health, nutrition, and education ([De la Torre, 2004](#)). This program uses a measure of poverty known as the Single Score Model (SSM) which is an index that summarizes demographic, educational, health, household equipment and regional location characteristics ([Regalia & Robles, 2006](#)), making it possible to distinguish those who are extremely poor from those who are not. It basically evaluates the poverty level of the program's beneficiaries ([De la Torre, 2004](#)). According to [Regalia and Robles \(2006\)](#), the SSM is effective in identifying the extremely poor households with precision; however, not

all the extremely poor households are included in the program. One of the reasons is that the money transfer is conditioned on the child's attendance at school and passing each school year, in the case of households with children.

In the present survey, the effect of a broad range of personal, academic, familial, and social variables in the prediction of social and educational mobility was considered. In this survey household, social mobility was evaluated using the SSM, whereas educational mobility was measured as educational achievement in comparison with that achieved by parents.

The main contribution made by this research is to better explain the impact of psychological variables on social mobility and therefore on improving the living conditions of the poorest, since studies on social mobility do not generally include psychological aspects and this topic is rarely addressed in psychological research.

## Material and Methods

### Participants

The sample was selected from a universe of 5,512 households that were active and had been admitted to *Oportunidades* since 2002, the year when the application of the SSM began. Households that were given an SSM score when they were admitted to the program and recertified three years later were selected from the list of beneficiaries. Within this group, households were selected from seven of the 32 states in the country, from semi-urban and urban areas, half of which had no or negative mobility while the other half had positive mobility. In the end, 1,257 households were available, of which 700 were randomly selected, with 600 constituting the study sample and 100 constituting the replacement sample.

A total of 603 households with 913 persons were interviewed, including 603 program beneficiaries and their spouses. A total of 65.2 percent of the respondents are women. Average monthly family income is \$2284 (SD=1408) Mexican pesos, the average number of person living off the family income being 4.62 (SD=1.87), while the average number of children living off the family income is 1.67 (SD=1.56) children per household. A total of 29.1 percent of the sample have had no schooling, 28 percent have not finished elementary school, 21.6 percent have completed elementary school and 21.3 percent have had some instruction beyond elementary school.

### Measures

Factorial reduced scales were used after having been previously validated on populations living in conditions of poverty, together with complete standardized scales for measuring the various constructs: Intelligence (Kellogg & Morton, 2003), Verbal comprehension (Thurstone & Thurstone, 1999), Optimism (Scheier, Carver, & Bridges, 2001), Negative self-concept (Goñi, Ruiz de Azúa, & Rodríguez, 2005; Rosenberg, 1965), Depression (Zung, 1965), Stress (Holmes & Rae, 1967), Locus of control (La Rosa, 1986), Motivation to achieve (La Rosa, 1986), Lack of self-regulation (Evans, Cullen, Burton, Dunaway, & Benson, 1997; Wiebe, 2006), Problem-solving strategies (D'Zurilla, Nezu, & Maydeu-Olivares, 2002; Heppner & Petersen, 1982), Coping styles (Folkman & Lazarus, 1985), Emotional intelligence (Bar-On, 1997), Sense of humor (Thorson & Powell, 1993), Resilience (Connor & Davidson, 2003; Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003), Religiosity (Gulke et al., 2003; Pargament, Smith, Koenig, & Perez, 1998), Parenting styles (Arnold, O'Leary, Wolff, & Acker, 1993; Robinson, Mandlco, Olsen, & Hart, 1995), Social support (Milburn, 1987; Zimet, Dahlem, Zimet, & Farley, 1988) and Social identity (Nario-Redmond, Biernat, Eidelman, & Palenske, 2004). The reliability data (Cronbach's alpha) for the scales or

the factors of which they are comprised is provided in Table 1. Age, school grades and gregariousness, defined as the amount of time spent with a group, were also measured. Table 1 shows only the scales and factors included in the regression analysis. Some of the measured scales factors were excluded from the analysis because of multi-collinearity.

**Table 1**

Psychometric Properties of the Instruments

Factor	Scale	Items	PEV	$\alpha$	<i>M</i>	<i>SD</i>
Negative self-concept	Self-concept	8	46.63	.83	2.09	.62
Optimism	Optimism	3	51.85	.74	3.12	.59
Lack of self-regulation	Self-regulation	10	51.57	.89	1.61	.60
Depression	Depression	20		.94	37.38	12.42
Stress	Stress	43		.84	.30	.34
Intellectual coefficient	Intelligence	268		.91	68.98	9.63
Evasive Impulsive	Problem solving	10	17.55	.85	2.30	.63
Stagnation	Problem solving	7	6.97	.80	2.56	.66
Externality	Locus of control	4	50.29	.91	2.89	.80
Internality	Locus of control	5	21.18	.85	3.27	.59
Direct	Coping	7	19.09	.82	2.84	.55
Denial	Coping	5	11.62	.84	3.08	.54
Impulsivity	Emotional intelligence	11	14.75	.91	2.02	.69
Empathy	Emotional intelligence	7	5.67	.87	3.13	.65
Insecurity–Insensibility	Emotional intelligence	9	4.83	.83	2.11	.62
Faulty sense of reality	Emotional intelligence	3	3.78	.85	1.62	.68
Positive religiosity	Religiosity	28	49.19	.97	3.22	.57
Negative religiosity	Religiosity	4	7.48	.77	2.30	.80
Mastery	Achievement motivation	9	48.75	.94	3.35	.55
Competitiveness	Achievement motivation	4	20.32	.88	2.63	.87
Sense of humor	Sense of humour	9	48.72	.89	2.78	.61
Social competency	Resilience	8	5.18	.90	2.96	.66
Personal strength	Resilience	6	4.39	.84	3.08	.60
Personal structure	Resilience	5	3.81	.83	3.09	.59
Verbal comprehension	Verbal skills	50		.88	9.92	7.47
Authoritative	Parenting styles	5	25.89	.88	2.74	.85
Authoritarian	Parenting styles	5	23.61	.80	2.59	.75
Permissive	Parenting styles	4	11.52	.73	1.98	.73
Social support	Social support	12	51.23	.90	3.16	.63
Friends' support	Social support	3	5.98	.95	3.15	.63
Social identification	Social identity	6	63.05	.90	3.28	.60
Satisfaction with school	Teacher–student relationship	8	34.46	.92	3.11	.72
Advice and emotional support	Teacher–student relationship	7	16.68	.90	2.25	.82
Negative relationship	Teacher–student relationship	5	12.33	.80	1.83	.73

Note. PEV = Percentage of explained variance.  $\alpha$  = Cronbach's alpha.

Social mobility was defined as the transition of an individual from one social position to another at a different level. In this study social mobility was measured according to the SSM scores on recertification three years later. The cut-off point for extreme poverty was .69, which divided the sample into two groups, those above the poverty line (SSM scores  $\leq$  .69) and those below it (SSM scores  $>$  .69).

Educational mobility refers to the educational achievements of one generation in comparison to a previous generation of reference, or in other words, the comparison between the educational level of offspring and that of their parents. Depending on the direction of the movement, educational mobility can be classified as upward or downward. In the first case, the transition is from a lower to a higher position, and in the second, from a higher to a lower position.

Educational mobility was measured by subtracting the average educational achievement of both parents from the respondent's educational achievement. Positive scores indicate greater educational progress on the children's part. For this analysis, the following variables were measured: Intelligence (Kellogg & Morton, 2003), Teacher–student relationship (Ang, 2005), and Parenting styles (Arnold et al., 1993; Robinson et al., 1995). The reliability data (Cronbach's alpha) for the scales or the factors of which they are comprised is presented in Table 1. School grades, the number of hours spent on homework and school infrastructure were also measured. Infrastructure was measured by combining the scores of a factor comprising two questions: type of building and type of classroom where classes were taught at elementary school. High scores indicate better school conditions.

With the exception of the intelligence tests and the socio-demographic questionnaire, the answer choices on the psychological scales were standardized to frequency, intensity or Likert scales, where appropriate, with four points, from 1 to 4. The values of the items were added up and, with the exception of the depression scale, averaged. High values imply a greater presence of the characteristic measured.

It is important to note that the instrument used to measure non-verbal intelligence was the Beta III (Kellogg & Morton, 2003), which is a standardized test. It was designed for the general population beginning at 16 years of age, for individuals who do not speak the language fluently, are illiterate or have language difficulties. The total application time is approximately 25 to 30 minutes. Each sub-test has a time limit on responding. It is a self-applied test. The five sub-tests are: 1) coding, 2) picture completion, 3) clerical checking, 4) picture absurdities, and 5) matrix reasoning. As for the Beta III's validity, it correlates to a significant extent with the Weschler Scale III (WAIS) of Intelligence for Adults, and with Raven's Progressive Matrixes Test, among others. General reliability is .91. The instrument used for measuring depression was developed by Zung in 1965, and adapted to Mexico by Calderon (2001). The scale is designed to be self-applied or applied by an interviewer. It is a clinical questionnaire for diagnosing depression, and consists of 20 items that correspond to frequent symptoms of depression in adults. Scores allow for classifying individuals as having "normal levels of depression" to having a "profile of severe depression." According to the author, the scale's reliability is .86.

## Procedure

The survey took approximately two months, after the interviewers had been trained. The interviews were individual, face-to-face and conducted in the homes of the respondents selected. In each case, the program beneficiary and his or her spouse were interviewed (with the exception of single or widowed beneficiaries or in the event that they were outside the locality). The interviews lasted approximately two hours, during which time the questionnaire was applied orally, or in other words, the interviewer read the questions to the respondents and wrote down their responses.

## Results

According to the criterion used in the *Oportunidades* program to determine the cut-off point for extreme poverty, the sample was divided into two groups according to their SSM scores, those above the poverty line and those below it. Logistic regression was used to identify a set of variables that can predict belonging to either of these groups. A previous analysis allowed for excluding predictors with high collinearity. The correlation coefficients among the predictors included in the analysis have absolute values ranging from .000 to .348. The results indicate that the equation with variables can correctly classify 96.8 percent of those who did not rise above the poverty line, 21.1 percent of those who managed to rise above the poverty line and 77.4 percent of the total. Approximate variance explanation is 17 percent, with a suitable goodness of fit. [ $\chi^2(8) = 5.43, N = 425, p = .711$ ].

According to the results, persons who are more likely to belong to the group that escaped from extreme poverty are persons who are older, tend to suffer less from depression, and have less external locus of control, fewer religious convictions, greater verbal comprehension and more social support.

With everything else equal, the odds of belonging to the group that rose above the extreme poverty line increased by 3.5 percent for each additional year of life, by nearly 5 percent for each increased unit of Verbal comprehension, and by 103 percent for each increased unit in the Social Support score. Meanwhile, the odds of belonging to the group that rose above the extreme poverty line are reduced by 3 percent for each increased unit in the Depression score, by 35 percent for each increased unit in the External Locus of Control score, and by 49 percent for each increased unit in the Religiosity score.

Conversely, variables such as intelligence, optimism, sense of humor, self-concept, stress, self-regulation, motivation to achieve, problem solving strategies, emotional intelligence, resilience, social identity, sex, and average grades were not significant as predictors of social mobility ( $p > .051$ ). [Table 2](#) shows the regression quotients, corrected Exp (B) proportion ratios (odds ratios) and confidence intervals.

At the same time, a multiple regression analysis to explain educational mobility included parents' average educational attainment, age, sex, intelligence, teacher–student relationship, average grades, school conditions, time spent on homework, and parenting styles as predictors, and educational mobility as the criterion. A previous analysis allowed for excluding variables with collinearity. None of the variables included in the analysis surpassed a variance inflation factor (VIF) of 2, indicative of multi-collinearity.

The results indicate that the equation predicts 44.4 percent of the variance in educational mobility. The strongest predictors show that the lower the parents' educational attainment, the greater the educational progress. Moreover, those with higher IQ scores, higher average grades, who spent more time on their homework and had less authoritarian parents also had greater educational mobility.

Conversely, variables such as the relationship with teachers, school conditions and gender, were not significant predictors of educational mobility ( $p > .08$ ). Furthermore, any relationship between social mobility and educational mobility is practically non-existent [ $r(840) = .037, p = .282$ ]. Regression and confidence intervals are shown in [Table 3](#).

**Table 2**

Predictors of Social Mobility

Predictor	Scale	B	Exp(B)	CI 95% Exp(B)
Age	–	.034	1.035	[1.011, 1.060]**
Sex(1)	–	.462	1.588	[.917, 2.748]
Negative self-concept	Self-concept	-.170	.843	[.514, 1.384]
Optimism	Optimism	.101	1.106	[.622, 1.966]
Lack of self-regulation	Self-regulation	.322	1.380	[.795, 2.393]
Depression	Depression	-.032	.969	[.942, .996]*
Stress	Stress	.699	2.013	[.944, 4.292]
Intellectual coefficient	Intelligence	-.023	.978	[.947, 1.010]
Evasive Impulsive	Problem solving	-.083	.921	[.539, 1.573]
Stagnation	Problem solving	.265	1.303	[.809, 2.099]
Externality	Locus of control	-.432	.649	[.442, .953]*
Internality	Locus of control	.291	1.338	[.727, 2.464]
Direct	Coping	.090	1.094	[.622, 1.925]
Denial	Coping	.084	1.087	[.655, 1.806]
Impulsivity	Emotional intelligence	.362	1.436	[.885, 2.331]
Empathy	Emotional intelligence	-.035	.965	[.604, 1.542]
Insecurity–Insensibility	Emotional intelligence	-.150	.860	[.506, 1.463]
Faulty sense of reality	Emotional intelligence	.203	1.225	[.775, 1.939]
Positive religiosity	Religiosity	-.677	.508	[.281, .918]*
Negative religiosity	Religiosity	.226	1.254	[.851, 1.847]
Mastery	Achievement motivation	-.282	.754	[.404, 1.407]
Competitiveness	Achievement motivation	.198	1.218	[.875, 1.697]
Sense of humor	Sense of humour	-.061	.941	[.598, 1.481]
Social competency	Resilience	.186	1.205	[.735, 1.977]
Personal strength	Resilience	-.316	.729	[.413, 1.289]
Personal structure	Resilience	.346	1.413	[.753, 2.650]
Verbal comprehension	Verbal skills	.047	1.048	[1.001, 1.098]*
School grades	–	.007	1.007	[.999, 1.016]
Authoritative	Parenting styles	.002	1.002	[.750, 1.339]
Authoritarian	Parenting styles	.202	1.224	[.854, 1.755]
Permissive	Parenting styles	-.166	.847	[.577, 1.243]
Gregariousness	Groups affiliation	-.013	.987	[.974, 1.000]
Social support	Social support	.709	2.032	[1.094, 3.773]*
Friends' support	Social support	.012	1.012	[.646, 1.585]
Social identification	Social identity	-.224	.799	[.494, 1.295]
R <sup>2</sup> Nagelkerke	–	.172	–	–

Note. *N* = 425. *CI* = Confidence Interval. Sex: feminine = 0, masculine = 1.

\**p* < .05. \*\**p* < .01.

**Table 3**

Predictors of Educational Mobility

Predictor	Scale	B	CI 95% B
Parental educational attainment	–	-.818	[-.931, -.705]***
Age	–	-.047	[-.069, -.025]***
Sex	–	.383	[-.044, .810]
Intellectual coefficient	Intelligence	.103	[.078, .127]***
School grades	–	.033	[.009, .057]**

Predictor	Scale	B	CI 95% B
Satisfaction with school	Teacher–student relationship	-.009	[-.347, .329]
Advice and emotional support	Teacher–student relationship	-.179	[-.463, .106]
Negative relationship	Teacher–student relationship	-.303	[-.609, .002]
Authoritative	Parenting styles	.021	[-.250, .291]
Authoritarian	Parenting styles	-.314	[-.619, -.009]*
Permissive	Parenting styles	.084	[-.248, .415]
School conditions	–	.204	[-.007, .415]
Time dedicated to homework	–	.085	[.029, .142]**
R <sup>2</sup> adjusted	–	.444	–
F	–	22.93***	–

Note.  $N = 319$ .  $CI$  = Confidence Interval. Sex: feminine = 0, masculine = 1.

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

## Discussion

The present study sought to contribute elements that will develop knowledge of the aspects of individuals and their environments that favor educational and social mobility, with the understanding that the latter is determined to a great extent by the capacities of individuals to take advantage of opportunities, overcome adversities and function in a healthy manner, despite the violent or threatening conditions in which they live. These capacities of individuals make it possible to achieve successful results through programs such as *Oportunidades*, which is aimed at improving the living conditions of the most vulnerable population and moving out of extreme poverty.

This study has analyzed the relative influence of a set of personal, family, scholastic and social variables on both social and educational mobility. The results indicate that personal (depression, external locus of control, religiosity, verbal comprehension), social (social support) and demographic variables (age) are important for social mobility, whereas parents' educational attainment, and demographic (age), personal (intelligence), scholastic (time dedicated to homework) and familial (authoritarian parenting style) variables are significant in educational mobility. Age is the only variable that has a significant effect on both types of mobility, however inversely. Those who are older experience greater social mobility and those younger experience greater educational mobility.

One of the predictors regarding social mobility is depression, which is understandable, since one of the characteristics of depression is paralysis of the will (Beck & Alford, 2009), which prevents the motivation and effort required to accumulate assets and resources that characterize social mobility. A tendency to attribute control to external causes decreases the likelihood of belonging to the group that managed to rise above the poverty line. This result is consistent with others that associate poverty with a trend towards an external locus of control (Palomar-Lever, 2005). Religiosity also decreases the likelihood of belonging to the group that rose above the poverty line. This is consistent with other studies documenting a certain propensity to assume poverty as destiny and to leave life in the hands of divine will (García & Corral-Verdugo, 2010; Székely, 1995), which reflects an inclination to have an external locus of control.

Within the variables that promote social mobility, social support increases the likelihood of belonging to the group that emerged from poverty. This suggests that mobilizing social resources in the event of difficulty enables persons to progress economically. However, it involves depending on others to resolve difficulties. Also, greater verbal

skills increase the possibilities for social mobility, suggesting that when individuals are able to better use language, they can take advantage of opportunities that will benefit them economically. Lastly, the positive effect of age suggests that older persons make better use of available resources, thereby increasing their possibilities of social mobility.

As for educational mobility, the fact that lower educational attainment on the parents' part predicts greater mobility is linked to the fact that it is easier for offspring to exceed their parents' level of schooling if the latter's educational attainment is low. It is also evident that the younger generations have had greater opportunities to study more. This last result is consistent with the educational expansion observed in Mexico (Fundación ESRU, 2008), as well as census data showing a constant increase in Mexicans' average educational attainment (National Institute of Statistics and Geography, 2007). At the same time, the positive effect of intelligence, academic competence and time spent on homework on educational mobility is understandable, since all these factors encourage a person to remain within the education system and to continue moving up through it, thereby promoting educational progress. The effect of parenting styles is somewhat less expected. An authoritarian parenting style would seem to hamper educational progress. However, unlike other results that suggest that the authoritative style encourages meticulousness, which in turn fosters academic performance (Heaven & Ciarrochi, 2008), in this study, an authoritative parenting style was not observed to have a significant effect on educational mobility. Since an authoritative parenting style tends to be more prevalent among people with a higher education -which was not the case with this sample- it is possible that an authoritative parenting style was very uncommon, and therefore has insufficient explanatory power.

No gender difference in educational mobility was observed, suggesting that both women and men are advancing in the educational sphere. This result is consistent with census data from 1960 to 2005, showing relatively similar average educational attainment by gender, with a half year advantage for men (National Institute of Statistics and Geography, 2007).

It is interesting that in the prediction of social mobility, half of the quotients are negative; thereby showing the characteristics a person should not have if he or she wishes to achieve social mobility. The prediction is much better for the group of poor persons as a whole than for the group that rose above the poverty line, according to the measurement used by *Oportunidades*. Poverty is more effectively explained as being dependent on factors such as depression, external locus of control and religiosity, which contribute to increasing it and on verbal comprehension, social support and age, which contribute to reducing it.

It is also noteworthy that parenting style is a significant predictor in educational mobility. This underlines the importance of the family of origin, particularly child-raising styles, as a transmitter of behavior models that have a subsequent effect on the individual's life. In contrast, the low influence of intelligence is striking, since it was considered to be an important factor in class mobility (Nettle, 2003).

This study makes it possible to identify predictors of social and educational mobility, by taking into account a wide array of personal, scholastic, familial and social variables. One of the limitations of this analysis, however, is that it is limited to persons in extreme poverty included in the government support program. One should also consider the fact that only a small number of Mexican states were included in the study sample. The results obtained can therefore not be generalized to other persons in extreme poverty who are not in the program nor can they be generalized to the beneficiaries of the program in states other than those sampled. This analysis would have to be extended to a national sample to determine the extent to which the relations found still hold. While the number

of households and individuals interviewed can be considered high enough for making generalizations, caution is recommended. As mentioned earlier, the selection of cases was random, but the list from which cases were selected only included households with recertification scores, and did not include rural communities. This limits the generalization of results to only non-rural households that are beneficiaries of the *Oportunidades* program in the seven Mexican states included from 2002 to the time interviews were conducted, and to households in which an economic assessment was conducted, and through which a recertification score was obtained.

Identifying and measuring the personal and social characteristics associated with educational and social mobility may assist those who formulate policies in determining what should be taught, improved or promoted in individuals considered to be at high risk (e.g. those extremely poor). In this case the formulation of social policies would be directed toward the objective of facilitating, shaping or promoting individual and environmental characteristics that are associated with educational and social mobility. In other words, strategies for building capacities in overcoming poverty should be implemented, by adding new and perhaps previously under-used protective factors to the repertoire of resources. Such efforts should be focused on at least four levels: individual, school, family and community (Ebrahim, Heller, & Reynolds, 2009; Varis & Keskinen, 2003).

Some examples of channels of intervention at the four levels could include: programs focused on improving family relationships and parenting styles (e.g. establishing limits for children, ways for parents who are separated to become involved in their children's education, ways to prevent familial violence), programs focused on reaching agreements (conflict resolution and communication skills), programs that assist families in economizing or managing money, programs aimed at assisting individuals in finding work, becoming self-employed or initiating a productive project, programs that facilitate the creation of new and better networks of social support, and programs focused on self-esteem and personal achievement, and aimed at increasing individuals' sense of control in their lives. In other words, it is necessary to design efforts for assisting individuals in building their own self-determination and developing their cognitive and social skills.

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