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The Relation of Family and Neighborhood Socioeconomic Status to Symptoms and Disability in  
Pediatric Patients with Chronic Abdominal Pain

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## Abstract

**Objective** Investigated the relation of family and neighborhood socioeconomic status to symptoms and disability in pediatric patients with chronic abdominal pain.

**Hypothesis** This study tested the hypothesis that measures of family and neighborhood SES would be highly correlated and that SES would be highly correlated with child symptoms and disability. Thus, lower SES would be associated with higher symptoms and disability. In addition, the study tested the hypothesis that the significant relation between socioeconomic status and child health would be mediated by children's passive coping with pain. **Methods** Census data was used to obtain measures of neighborhood SES of 566 pediatric patients, ages 8-17 years old. Measures of family SES were obtained from patients' parents. Patients completed questionnaires regarding their symptoms and disability. **Results** Family and neighborhood SES were highly correlated. There was no significant correlation between neighborhood or family SES and health. Because there was no relationship between SES and child health, we were unable to test whether the relation between SES and child health was mediated by passive coping. In an exploratory analysis, we examined the relation between parent-reported family stress and child health. This relation was significant and was partially mediated by children's passive coping with pain. **Conclusions** Low socioeconomic status is not correlated with child symptoms or disability. Instead, high levels of child symptoms and disability are related to high levels of family stress, with passive coping acting as a partial mediator between stress and children's health.

### The Effects of Socioeconomic Status on Adolescent Health (Primarily Chronic Pain)

Socioeconomic status (SES) is strongly associated with an individual's well-being and physical health. Many studies have documented a positive correlation between SES and health, and have concluded that people living in poorer communities tend to have more health problems, including chronic pain (Saegert, S.C., 2006). Various mechanisms may explain the negative health conditions reported in low SES neighborhoods: higher chronic stress, hazardous environmental conditions, less access to medical assistance, and maladaptive coping strategies (Baum, 1999). Although limited research has been performed looking at the association between income inequality and health problems in adolescents, it is important to consider, as adolescent health may predict adult health. The purpose of this paper is to investigate the relation of socioeconomic status to adolescent health, with a primary focus on chronic pain.

Socioeconomic status (SES) is defined as an individual's or neighborhood's economic or social standing within a hierarchical class structure (Institute of Education Sciences). It is measured by several factors, including income, education and occupation. Education is an important determinant of SES, because higher levels of schooling usually lead to better occupations, more economic success, and further available resources (Saegert, S.C., 2006). For example, Evans et al. (2002) documented that the quality of schooling, starting as early as daycare, can impact a child's cognitive and social development. A stimulating school environment allows children to gain more favorable qualities (sociability, independence, and self competence), which in turn are more likely to lead to higher success in the future. Income is evidently an indicator of status, as people having higher incomes reside in high SES neighborhoods. Finally, occupation, the third aspect of socioeconomic status, determines a

person's income and allows for an expansion of social networking and a sense of identity (Saegert, S.C., 2006).

SES may be assessed on individual, family, and neighborhood levels. At the individual level, SES refers to a person's level of education, annual income, and current job. The individual's SES is often a subjective measure, however, because people tend to interpret their social status by where they stand in comparison to their peers. (Chen, 2006). At a family level, SES pertains to a household's income, savings, and value of their home. Finally, the SES of a neighborhood is assessed with measures of the residences as a whole and may include the percent of all people attending college, the median family income of the neighborhood, and the percent of residents that are employed. SES is a prevalent, inescapable characteristic of society that has an impact on almost all aspects of an individual's life starting at birth. Individual, family, and neighborhood SES play one of the largest roles in determining a person's overall physical and mental health (Chen, 2006).

Measures of socioeconomic status are often associated with an individual's physical health. Those living in low SES neighborhoods usually have more chronic health problems and illnesses, based on their reports of self-rated health on questionnaires (Martinez). People living in both low family and neighborhood SES have been shown to have more negative psychological characteristics (threat interpretation, discrimination, and hostility), higher BMI, and lower basal cortisol levels than people with higher family and neighborhood SES (Chen, 2006). Furthermore, children living in poorer neighborhoods have been reported to have poorer cardiovascular health, worse dental health, and substance abuse issues (Poulton, 2002). SES has also been associated with diseases such as cardiovascular disease, diabetes, metabolic syndrome, arthritis, and respiratory disease (Adler 1999). Chronic pain patients from poor neighborhoods have reported

more intense, long lasting pains, especially during periods of financial stressors. In particular, Skinner studied patients with arthritis pain who found themselves in a vicious cycle; the chronic pain created further daily stress, which in turn worsened their physical health (Skinner 2004). Thus, it appears that low SES is a risk factor for a variety of health problems.

Several mechanisms have been proposed to explain the correlation that exists between SES and an individual's physical health. First, there is evidence to suggest that people living in poor neighborhoods are usually exposed to worse environmental conditions, which will have negative affects on their health (Evans 2002). Risks include toxins, indoor air pollutants, poor schools, bad work environments, crowded living conditions, excessive noise, and poor water quality. In addition, people in low SES neighborhoods are also in contact with more dangerous activities that can impact health, including drug use, crime, and excessive alcohol intake (Baum 1999). These people tend to drink more alcohol and engage in more drug use than wealthier people with higher educations. Finally, diet and nutrition, which also vary by SES, affect overall health. It is harder for people with low incomes to buy all of the essential foods for a balanced diet. They are more inclined to eat unhealthy meals at inexpensive fast food restaurants, which will have negative impacts on their health. In addition, studies have also shown that wealthier people tend to engage in more physical activity during their leisure time, whereas both lower SES men and women spend more time watching television. Lack of exercise can lead to negative health repercussions (Baum 1999). Therefore, the dissimilarity in the environments is one explanation for the differences in health between low and high SES neighborhoods.

Chronic stress is a second mechanism used to explain the poorer health conditions among low SES individuals. Lower SES neighborhoods are forced to deal with worse environmental and social conditions that add to their chronic stress. People with lower income are shown to be

less confident and not as satisfied with their lives. Kessler argues that these people are more apt to have psychological and emotional distress (1979). Low SES individuals have more financial stresses, because they are not able to buy essential products, or services that will reduce their anxieties (Baum 1999). The chronic stress that low SES individuals are faced with can cause mental as well as physical problems. Studies have shown that allostatic load, the wear and tear that repeated stress has on the body, is higher for low SES people (Szanton, 2005). This load affects health, because it causes burdens to the neural, neuroendocrine, and immune systems. Skinner (2004) examined the effects that weekly variations in financial stress had on the physical health of arthritis patients. She documented that patients felt more acute pains during times when there were increased financial burdens. Thus, people with low SES, who have chronic financial stress, are likely to report worse physical and emotional health.

Another mechanism used to account for the worse health problems among individuals with low SES is their tendency to deal with stress using maladaptive coping strategies to catastrophize about their health. In a study of pain patients, Roth (2002) used pain coping questionnaires to examine the relationship between low SES and methods of dealing with pain. He found that people with low SES tended to use external methods of control, such as prayer and hope, to ease their pain. They also were more likely to catastrophize about their pain, stating that it was uncontrollable and hindered them from completing their daily responsibilities (2002). Because people in low SES environments are more likely to experience feelings of helplessness, anger, and depression, they tend to view pain as never-ending with no methods of treatment (Bosma, 1999). Therefore, it can be argued that socioeconomic status influences individuals' methods of dealing with negative events throughout life. People of low SES tend to use passive coping strategies, such as catastrophizing, when experiencing pain.

A further explanation to account for the increased health problems among low SES individuals is their lack of access to medical assistance and health care. A large number of people who are uninsured work in low SES occupations, have low levels of education, and low incomes (Baum 1999). These people who do not have insurance are more reluctant to seek out medical care, because they are unable to afford it. This lack of access can cause chronic conditions to worsen. As a result, their insufficient access to medical assistance is a huge risk for poor health. Furthermore, it has been observed that patients on Medicaid (low SES) have reported more cases of arthritis, disabilities, and lower Health-Related Quality of Life than those able to afford private insurances. Therefore, it has been demonstrated that patients on Medicaid tend to have significantly lower health quality and more disabilities (Brunner 2006). Overall, low income families who are not able to afford insurance do not have sufficient access to medical care, which can lead to worse health conditions.

Some argue that specific personality traits that are associated with low income occupations can also explain poorer health among low SES individuals. In particular, peoples' careers, such as unskilled manual laborers, generally exhibit adverse personality traits, including external locus of control, neuroticism, and a lack of active problem solving. These unfavorable traits can account for their self reports of poor health (Bosma 1999). Bosma notes that various aspects of an individual's personality are influenced by environmental conditions and parenting styles during childhood. The people living in low SES neighborhoods tend to be more neurotic and more hostile than people living in high SES neighborhoods. Bosma suggests that laborious, insignificant occupations, such as unskilled manual labor, may lead people to form unfavorable personality traits and maladaptive coping strategies, which in turn may cause them to report poorer health.

Members of minority cultures who are discriminated against tend to have low SES and worse health conditions. Martinez (2006) suggests that language and cultural barriers make it difficult for these people to access the appropriate medical attention when needed. Furthermore, many immigrant groups are residents of the low income neighborhoods and obtain unskilled manual labor jobs that can have negative health risks. Thus, many immigrants may have socioeconomic disadvantages due to discrimination, language differences, and cultural barriers, which can ultimately lead to worse health conditions.

In contrast to the prevalent argument that SES influences an individual's health, some argue that an opposing relationship exists in which health determines socioeconomic status. According to Dohrenwend's "drift" theory (1992), people who have predisposed unfavorable personality traits are less likely to marry and tend to be poorer. These people who do not have the abilities needed to socially interact with others tend to have more stressful life experiences, which can have negative affects on health (Kessler 1979). Another argument that health influences SES is that personality traits that people are born with will affect their living conditions. For instance, diseases that develop early in childhood limit children's levels of education, which in turn will affect their socioeconomic status. In effect, the health of a sick child is a risk factor for social drift to low SES (Adler 1999). These examples support the argument that health may determine an individual's SES.

It is essential to study the relationship that exists between socioeconomic status and physical health among adolescents in order to predict their health as adults. Studies have examined the correlation between economic problems during childhood and adults' current health and concluded that both present as well childhood SES are important contributors to health problems. Environmental exposures (stressors, dietary factors, coping strategies, etc.) at a

young age may impact an individual's health over time (Howell, 2004). Poverty in childhood can impact cognitive development (due to worse education and less stimulating environments), which can lead to negative health outcomes and maladaptive coping strategies. Therefore, adolescent SES is extremely important because it can predict health problems that may arise in adulthood.

Chronic pain is of particular interest when examining the correlation between SES and adolescent illness. According to a study by Mulvaney et al. (2006), a child's environment can predict the course of chronic abdominal pain as they become adolescents and young adults. Mulvaney et al. specifically found that higher levels of life stress in pediatric patients with abdominal pain predicted maintenance of symptoms and disability during the five years following their medical evaluation. If life stress is associated with low SES, Mulvaney's findings may reflect a link between low SES and the maintenance of chronic pain in pediatric patients. Similarly, Poulton (2003) noticed that pain patients who had lower self worth and more life stresses tended to have increased levels of pain. This could have been attributed to differences in personality characteristics, such as lower self worth, worse coping strategies, more anxiety, and depression.

There are some limitations to the conclusions that have been drawn on the existing correlations between SES and health. First, little research has been done on the effects of SES on children's health. It cannot be inferred that the same positive correlation that exists in adulthood between SES and health exists in children. Furthermore, it may be premature to conclude that low income directly leads to poor health. Issues that are unrelated to income, such as, state policies or methods of healthcare, might cause the poorer health conditions in people with low income (Sturm, 2002). Also, few studies in the United States have examined how SES is linked

to chronic pain; more attention has been put to studying how income affects overall health (Martinez). It is important to study the relationship between SES and chronic pain, however, because chronic pain is a common cause of disability and is more prevalent among lower SES than higher SES individuals (Skinner, 2004). It is important to identify the mechanisms linking SES and chronic pain in order to treat chronic pain patients.

Although there has been extensive research showing that a positive correlation exists between SES and health, with people living in poorer communities having more health problems, there is limited research reviewing the mechanisms by which low SES leads to poor health.

### *Research Questions*

The goal of the present study was to answer the following three questions: a) Are measures of family and neighborhood socioeconomic status significantly correlated? B) Is SES significantly correlated with child symptoms and disability, such that lower SES is associated with higher symptoms and disability? C) Is there a significant relation between SES and child health that is mediated by passive pain coping?

### *Hypothesis*

a) Measures of family and neighborhood SES will be highly correlated. b) SES will be highly correlated with child symptoms and disability, such that lower SES will be associated with higher symptoms and disability. C) The significant relation between socioeconomic status and child health will be mediated by passive pain coping.

## Methods

### *Participants*

Participants were 577 patients, ages 8-17 (mean: 11.82; standard deviation: 2.49; minimum: 8; maximum: 17) years (See table 1). 60.5% were female (N=348) and 39.5% were male (N=229) (See Table 1). All reported abdominal pain for at least 3 months with some reporting pain since birth (mean: 54.58 mo; SD 163.27 mo). No participants had any other chronic illnesses or disabilities. They were interviewed at a gastroenterology clinic before admission into the study. Participants were all English speaking and living with a parent. 92% were white, 4 % African American, 1% Hispanic, 1% Asian and 2% from other ethnic backgrounds.

### *Measures*

*Census:* The census supplies information on the socioeconomic status in varying zip codes. It was used in this study to attain information on the median family income, median value of house, educational levels of residents (% of residents who received a BA or higher). For patients in this study, the mean of the median family income gathered from census data was 51,700 dollars with a standard deviation of 17,000. The minimum income was approximately 23,400 dollars and maximum income was 106,700 dollars (Table 2). (U.S. Census Bureau, 2000).

*Demographics form:* The Demographics form used in this study includes information on the patient and his/her family. It assesses the child's gender, date of birth, ethnicity, family members living in the home, and marital status of the parents. It also includes level of education for both parents and their current occupations, which was used to calculate the Hollingshead

index of social status. As presented in Table 4, 30% of the participants' parents (N=530) graduated high school, 37% had some college/tech education, and 12% attended graduate school/professional school. 38% of the parents' spouses (N=469) were high school graduates, 29% had some college/tech education, and 15% attended graduate/professional school.

*Hollingshead Index of Socioeconomic Status:* The Hollingshead SES is a four-factor index of social status. It is based on both parents' levels of occupation and education. The Hollingshead score of an individual is calculated by multiplying the scale value for occupation by a weight of five and the scale value of education by a weight of three. If both parents are employed, the scores are added and divided by two to receive a combined Hollingshead score (Hollingshead, 1975). Table 3 presents the percentile of participants' parents within each occupation level according to the Hollingshead index of social status. Most parents were technicians, semiprofessionals, and small business owners.

*Family Inventory of Life Events:* The Family Inventory of Life Events is a measure completed by parents that assesses the number of family life events in the previous year. Total scores are the sum of events endorsed (FILE; Mccubin and Patterson, 1987).

*Pain Response Inventory:* The Pain Response Inventory is a measure completed by the children that assesses the strategies used to cope with abdominal pain. It is divided into three subscales: active coping, passive coping and accommodative coping. Whereas passive coping methods include isolation and expecting the worst, active coping methods try to lesson the pain. Accommodative coping refers to the process of adapting to the pain. (PRI; Walker et. al., 1997).

*Children's Somatization Inventory (CSI):* The CSI is a self-report evaluation of the child's somatic symptoms, including dizziness, chest pain, racing heart, and fatigue. The symptoms are assessed on a five-point scale from 0 (not at all) to 5 (a whole lot) on how often

the child experiences the somatic symptom (CSI; Garber et al., 1991; Walker and Garber, 2003; Walker et al., 1991).

*The Functional Disability Inventory (FDI):* The FDI consists of 15 items that assesses the intensity of children's self reported impairment in physical and psychosocial functioning as a result of physical health in the past 2 weeks. For each item, the subject is asked to rate their ability to complete the task on a scale from 0 (no trouble) to 4 (impossible) (FDI; Claar & Walker, 2006; Walker and Green, 1991).

### *Procedure*

Patients came to a pediatric gastroenterology clinic for an evaluation of chronic abdominal pain. If interested in participating in the study, the patient would arrive early for this appointment. Informed patient consent was received and the protocol was given to the patient once arriving at the clinic. An interviewer administered the questionnaire to the child in a private room to assure that questions were understood and administration was standardized among patients. The patient was asked to choose the appropriate answer to each question from a response sheet (the interviewer was not able to view the responses).

## *Results*

### *Correlation Analysis*

*Research Question #1: Correlation of Family and Neighborhood SES.* Table 5 presents the correlation among family and neighborhood measures of SES. As expected, family and neighborhood SES were highly correlated. The median family income gathered from census data had the highest correlation with the combined Hollingshead score of the participants' parents, with a correlation of  $r=.40$ . The percentage of people with a Bachelor's or higher degree of

education was also significantly correlated with the education of the participants' parents ( $r=.30$ ). Therefore, the measures of family and neighborhood socioeconomic status were related, confirming that the census data portrayed an accurate representation of the socioeconomic status for the subject pool.

*Research Question 2: Correlation of SES with child symptoms and disability.* Table 6 shows that there is no significant correlation among the Hollingshead Index of Social Status, neighborhood SES, child symptoms, and disability. I hypothesized that SES would be highly correlated with child symptoms, such that lower SES would be associated with higher symptoms. However, the correlations were non-significant, ranging from  $-.06 \rightarrow 0.0$ , with a mean correlation of  $r=-.03$ . The data does not support the hypothesis that SES is correlated with child symptoms and disability. There were no significant correlations between any of the SES measures and CSI scores, demonstrating that low SES is not associated with higher symptoms. As shown in Figure 1, the correlation between family SES (Hollingshead Social Status) and CSI scores was  $r=-.06$ , thus there was no significant relation between family SES scores and CSI scores. There was no correlation between neighborhood SES (medium family income) and CSI scores either, with the variables having a relation of  $r=0$  (as shown in Figure 2).

As presented in Table 6, no measure of SES was correlated with functional disability scores (FDI), contrary to what was predicted in my hypothesis. The correlations between all SES measures and FDI scores were extremely low, ranging from  $-.05 \rightarrow -.02$ , with a mean correlation of  $r= -.03$ .

*Additional Analyses: Correlations of family stress with child symptoms and disability*

Table 7 depicts the correlations between family stress (FILE), SES, bodily symptoms, and disability. The correlations between family stress and socioeconomic status (family or

neighborhood) were not significant, ranging from  $r = -.07 \rightarrow .01$ . There was, however, a significant relation between FILE scores and CSI scores ( $r = .17, p < .01$ ), showing that participants with increased family stress tended to report higher bodily symptoms. The FILE scores were also moderately correlated with disability (FDI scores), with a correlation of  $r = .10, p < .05$ . Therefore, in contrast to SES, family stress was significantly related to child health and disability.

Figure 3 shows the correlation of family stress (FILE) and bodily symptoms, with passive pain coping acting as a partial mediator. FILE scores were significantly correlated with CSI scores, having a correlation of  $r = .17$ . The correlation between FILE and CSI decreased to  $r = .12$  when passive coping was added to the regression equation, demonstrating that passive coping with pain acts as a partial mediator between FILE and CSI scores. Therefore, in the context of greater family stress, children may be more likely to cope passively with their pain. Passive coping with pain is associated with higher levels of symptoms.

Figure 4 presents the impact that passive coping has on the relation between FILE and FDI scores. Family stress has a moderate relation with functional disability, with a correlation of  $r = .10$ . When passive coping is added, the relation between FILE and FDI scores decreases to  $r = .04$ , demonstrating that passive coping with pain acts a partial mediator between the two variables.

### General Discussion

In this study, I examined the relationships among family SES, neighborhood SES, child bodily symptoms, functional disability, and methods of coping with pain in a sample of pediatric patients with chronic pain. Through correlation analyses, I examined the association of socioeconomic status with child health. Results from this study did not support the hypothesis

that socioeconomic status is highly correlated with child symptoms and disability. Neither family nor neighborhood SES was highly associated with child health. Patients in lower SES neighborhoods or families with lower SES did not report higher symptoms or disability. Because there was no relationship between SES and child health, we were not able to test whether passive coping with pain acted as a mediator between SES and symptoms.

In addition, socioeconomic status was not significantly correlated with family stress. This finding contradicts the notion that subjects living in low SES neighborhoods would experience more stress. It is possible that SES is associated with measures of stress other than the measures of family stress used in this study. For example, SES might be associated with workplace stress for parents. In order to elaborate on the study, we examined whether family stress was correlated with child symptoms and disability, and if so was this relationship mediated by children's passive coping with pain. Correlation analyses indicated that there was a significant relation between family stress and children's reports of symptoms and disabilities. This relationship was mediated by passive coping, suggesting that children who experience higher family stresses are more likely to cope passively with pain, and passive coping with pain is associated with reports of more symptoms and disability. Because the data were cross-sectional, no inferences can be made about the direction of causality among these variables.

### *Limitations*

The absence of a relation between SES and child symptoms and disability may be the result of several factors. First, the subject pool was restricted in SES range. Most of the participants were from middle class neighborhoods, and probably were not substantially affected by poor SES. According to census records, the lowest neighborhood medium family income was \$23,500, with 56% of the population having annual incomes above 50,000. Therefore, the

majority of the subjects most likely had healthcare, adequate nutrition, acceptable school systems, etc, thus not experiencing the extremity of low SES conditions. If the sample had included lower SES neighborhoods, poor environmental conditions might have correlated with higher symptoms.

A second factor that may have impacted the results was the use of the census for the measure of neighborhood SES. The huge census tracks could potentially have been too large a unit to measure each specific neighborhood SES. If we had been able to get down to the block level, and thoroughly studied current data on each individual zip code, neighborhood SES may have been more predicative of child health. Also, although median family income from the census data had the highest correlation to the Hollingshead Index of Social Status, it may not have been the best predictor of neighborhood SES. It might have been more useful to use signs of SES that occur daily in life. Possible daily measures of SES could include nutrition and diet, neighborhood pollution, access to healthcare and medical assistance, and drug use. If a previous study were to distribute surveys in each neighborhood to determine specific everyday signs of SES, the use of neighborhood SES might have been more accurate.

Another limitation of the study is the use of the Hollingshead Index of Social Status to determine the socioeconomic status of the participating families. This measure takes into account a person's education and occupation, but fails to account for annual income. The demographics form only asked for the occupation, number of hours of work per week, and the education levels of both parents. It failed to account for the annual medium family income, which could have been a more accurate measure for comparison to the census data. Scoring the Hollingshead is also not extremely reliable, as the occupation that the parent records on the survey does not always clearly fit into one of the nine Hollingshead occupation categories.

*Future Research*

Additional information on participants' SES, such as median family income, would allow for a more reliable investigation of the correlation among family SES and child health. The subject pool should be expanded so that there is a wider range of SES among the participants. Future studies could also look at what particular family stressors are associated with child symptoms and disability, as health seems to be unaffected by financial stressors.

*Conclusions:*

In this study, family and neighborhood socioeconomic status were not significantly correlated with child health. Children from low SES neighborhoods/families were not more likely to have worse bodily symptoms and higher disability than children in higher SES neighborhoods/families. However, family stress was associated with worse health. Children's passive coping with pain acted as a partial mediator of the relation between family stress and children's symptoms and disability.

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**Table 1.** *Participants (N=577)**Age of Participants*

|     | Minimum | Maximum | Mean |
|-----|---------|---------|------|
| Age | 8.0     | 17.0    | 11.8 |

*Gender of Participants*

| Sex    | Percent |
|--------|---------|
| Male   | 39.5    |
| Female | 60.5    |

**Table 2.** *Neighborhood SES (Median Family Income)*

*Neighborhood Median Family Income* (U.S. Census Bureau, 2000)  
(N=566)

|                      | Minimum | Maximum | Mean    | Standard Deviation |
|----------------------|---------|---------|---------|--------------------|
| Median Family Income | 23,400  | 106,700 | 51,7000 | 17,000             |

**Table 3.** Occupational Levels of Participants' Parents (Hollingshead Scores)

| <i>Person filling out form's Hollingshead Code</i><br>(N=349) |         | <i>Spouse's Hollingshead Code</i><br>(N=395)               |         |
|---|---------|--|---------|
| Occupation  | Percent | Occupation   | Percent |
| Farm laborer, day laborer                                     | .6      | Farm laborer, day laborer                                  | .5      |
| Unskilled worker  | 5.2     | Unskilled worker   | 5.8     |
| Machine operator  | 7.7     | Machine operator   | 17.5    |
| Skilled manual labor, military, police/fire                   | 10.0    | Skilled manual labor, military, police/fire                | 13.9    |
| Clerical/sales  | 22.9    | Clerical/sales   | 8.4     |
| Technician, semi-professional                                 | 20.1    | Technician, semi-professional                              | 18.2    |
| Sm. Business owner, teacher                                   | 19.5    | Sm. Business owner, teacher                                | 18.5    |
| Mid mgmt, professional  | 10.3    | Mid mgmt, professional                                     | 11.6    |
| Sr. manager or professional (MD, professor, minister, CEO)    | 2.3     | Sr. manager or professional (MD, professor, minister, CEO) | 5.6     |

**Table 4. Parent's Education**

*Educational Levels of Parent Participants*  
(N=530)

| Education         | Percent |
|-------------------|---------|
| < High schl       | 7.00    |
| High schl grad    | 22.00   |
| Some college/tech | 37.00   |
| College grad      | 22.00   |
| Grad/ prof schl   | 12.00   |

*Education Levels of Spouse*  
(N=469)

| Education         | Percent |
|-------------------|---------|
| < High schl       | 9.00    |
| High schl grad    | 29.00   |
| Some college/tech | 29.00   |
| College grad      | 18.00   |
| Grad/ prof schl   | 15.00   |



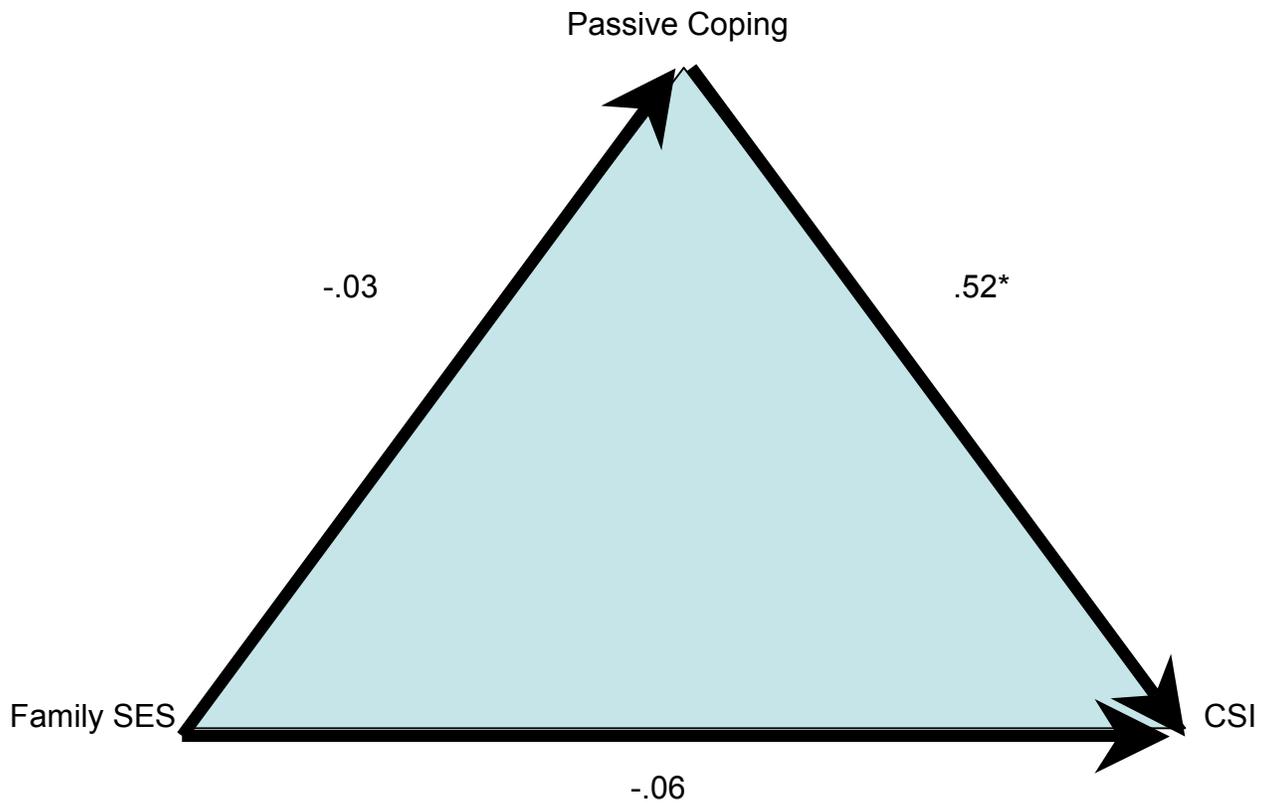
**Table 6.** *Correlations of Hollingshead SES, Neighborhood SES, Child Symptoms, and Functional Disability*

|                               | Mean CSI<br>Score | Mean FDI<br>Score |
|-------------------------------|-------------------|-------------------|
| Combined Hollingshead Code    | -.06              | -.03              |
| Parent's Hollingshead<br>Code | -.07              | -.05              |
| Spouse's Hollingshead Code    | -.02              | -.03              |
| Parent's Education            | -.04              | -.03              |
| Spouse's Education            | .04               | -.03              |
| Median Family Income          | 0.0               | -.03              |
| Median Value of House (\$)    | 0.0               | -.02              |
| Ed: % BA or Higher            | 0.0               | -.02              |

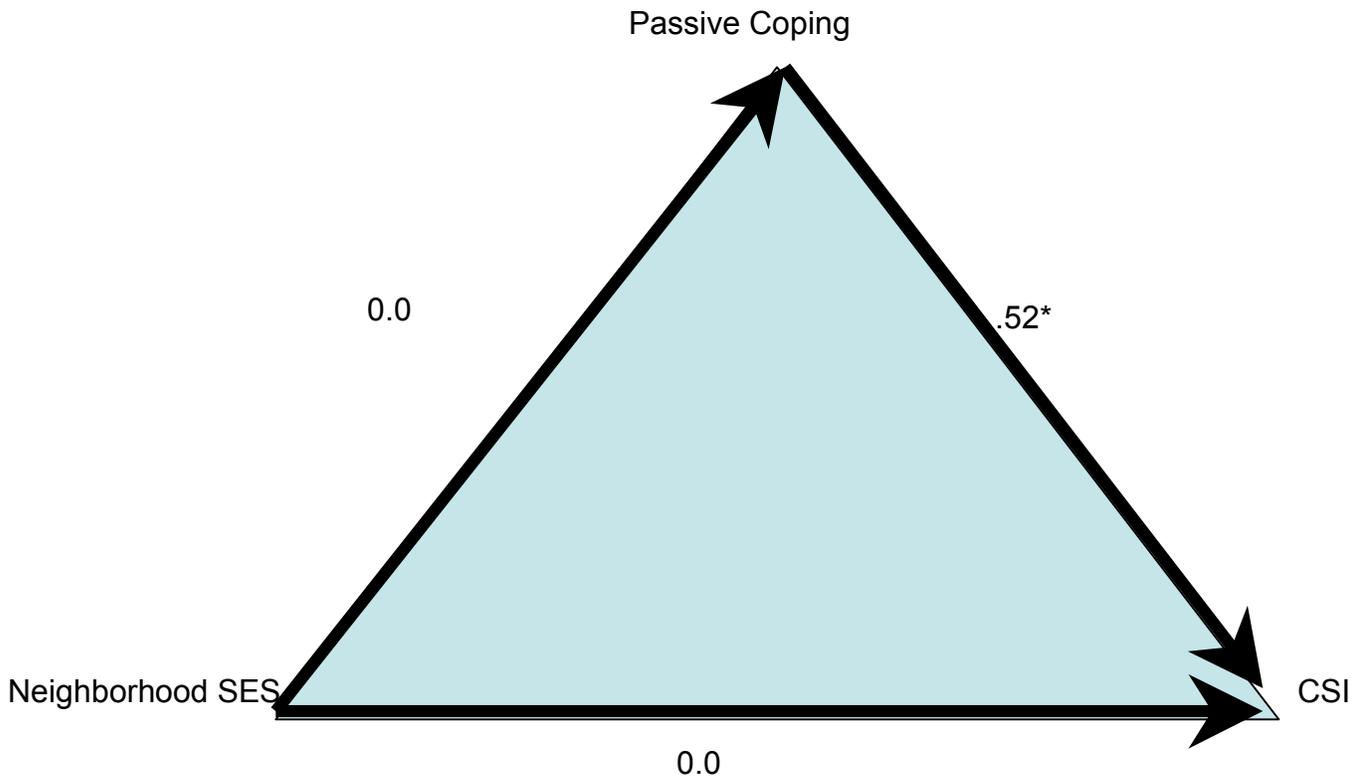
**Table 7.** *Correlations of Family Stress, Neighborhood SES, Family SES, Child Symptoms, and Disability*

|                               | FILE<br>sum | Median<br>Family<br>Income | Hollingshead<br>Social Status | CSI<br>Score | FDI<br>Score |
|-------------------------------|-------------|----------------------------|-------------------------------|--------------|--------------|
| FILE sum                      | --          | -.07                       | .01                           | .17**        | .10*         |
| Median<br>Family<br>Income    |             | --                         | .40**                         | 0.0          | .03          |
| Hollingshead<br>Social Status |             |                            | --                            | -.06         | -.03         |
| CSI Score                     |             |                            |                               | --           | -.57**       |
| FDI Score                     |             |                            |                               |              | --           |

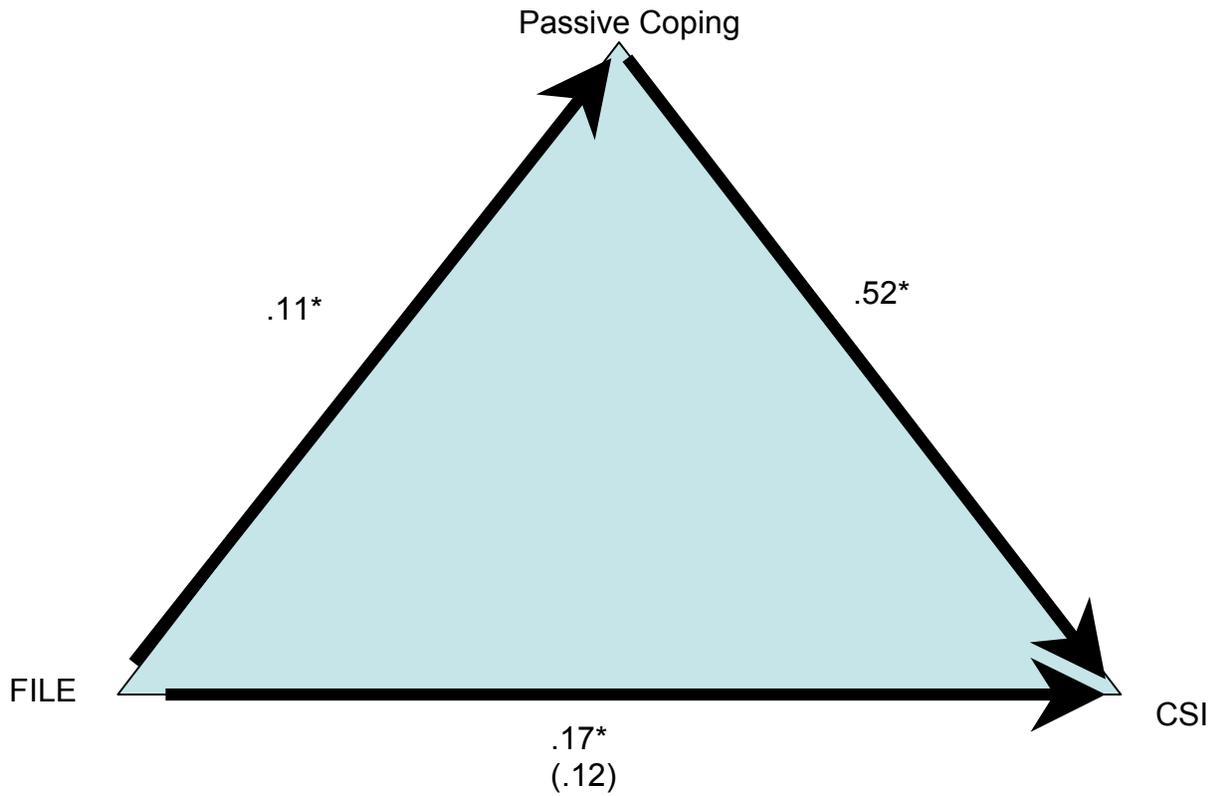
**Figure 1.** *Correlation of Family SES (Hollingshead Social Status) and CSI*



**Figure 2.** *Correlation of Neighborhood SES (Median Family Income) and CSI*

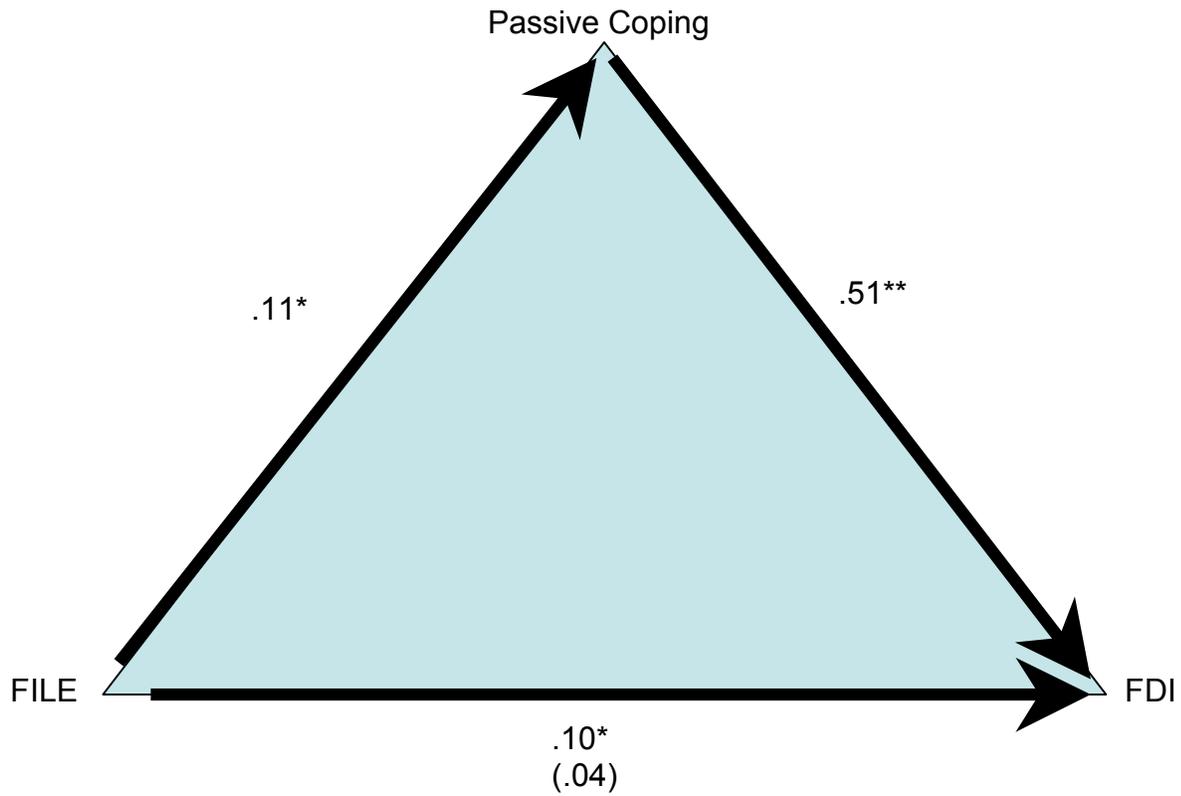


**Figure 3.** *Correlation of Family Stress and CSI*



\*\*When passive coping was added, the relation between FILE and CSI was reduced to  $.12$ , demonstrating that passive coping acts as a partial mediator between FILE and CSI

**Figure 4.** *Correlation of Family Stress and Disability*



\*\*When passive coping was added, the relation between FILE and FDI decreased to .04, demonstrating that passive coping acts as a partial mediator between FILE and CSI