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COGNITIVE FACTORS ASSOCIATED WITH SOCIAL SUPPORT
IN ECONOMICALLY DISADVANTAGED MOTHERS:
COGNITIVE FLEXIBILITY AND SOCIAL PROBLEM SOLVING SKILLS

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Abstract

Little research has been done regarding what is required to maintain a social support network. However, this is an important area of study because social support has been shown to act as a buffer against the negative effects of stress. Individual capacities may play a role in the ability to maintain relationships. One such factor that may be crucial is cognitive flexibility. Cognitive flexibility allows the individual to have better social problem solving skills. If someone has high cognitive flexibility capacity, they are more likely to be able to solve social problems in varying ways, therefore, maintaining healthy relationships and a supportive network. This study examined cognitive flexibility and social problem solving skills as predictors of social support. Results showed a positive trend between cognitive flexibility and social problem solving skills ($r = .22$, $p = .086$). No statically significant results were found linking cognitive flexibility and problem solving with social support. Exploratory analysis was done to further examine the social support measure. This analysis showed trends which are discussed.

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Cognitive Factors Associated with Social Support Maintenance: Cognitive Flexibility and Problem Solving

Introduction

The study of individual characteristics that may lead the individual to have social support is important. This is because social support has been proven to buffer against the negative effects of stress. Social cognitive theories of relationships stress the importance of cognition for social competence. The importance of social problem solving has been studied as part of social competence. Basic cognitive capacities that can lead to successful problem solving have not been clearly identified. Cognitive flexibility is one factor that may lead to good social problem solving skills, and should, therefore, aid in the maintenance of relationships. The ability to maintain healthy relationships should provide the individual with a supportive network.

Although social support has been shown to buffer against stress, there is very little research in the area of adult friendship creation and relationship maintenance. Most research in the area of relationship formation is focused on children. The focus of the present project was to examine cognitive factors that may lead to the maintenance of a supportive social network in an adult population. In order to understand the need for research on individual characteristics that may lead to the ability to maintain a healthy network, the negative effects of stress will be examined, including a discussion of certain contexts in which stress is particularly taxing. Then social support is reviewed as a buffer that protects an individual against the negative effects of stress. This buffering against stress can aid in overall well-being. Once this link is established, and the importance of

social support for overall well-being is understood, a social information processing model is examined to understand how cognitive flexibility, an individual cognitive factor, may be a component of social-problem solving skills. Social skills should lead one to be able to maintain relationships, therefore maintaining a supportive social network.

Negative Effects of Stress

Stress has been studied by most disciplines within psychology as well as other branches of science. The definition of stress tends to vary by discipline. For the purpose of this study, stress will be defined as a process that occurs when ‘environmental demands tax or exceed the adaptive capacity of the organism, resulting in psychological and biological changes that may place persons at risk for disease’(Cohen, Kessler, & Gordo, 1997). The events that cause stress can range from daily, regular stressful events to life changing circumstances. Regardless of the nature of the stressor, stress can have many negative effects on a person physically, emotionally, and psychologically. Negative outcomes of stress can range from negative moods to serious physical ailments (Cochrane, 1971). It is important that people can efficiently handle stress to aid in overall well-being (Lichtenthal, Simpson, & Cruess, 2005).

Stress in Specific Contexts

Stressors play a particularly significant role in the success of certain populations. Disadvantaged families, with low socio-economic status (SES), are at a greater risk for chronic psychological distress (Barnett, 2005). The environmental demands of this

population can exceed the individuals' capacities, which, according to the previously stated definition of stress, can increase risk for psychological and biological harm. These families face chronic financial strain and live in areas of high crime, both factors that have been shown to negatively affect stress levels (Farkas & Valdés, 2010). Because of this, it is important to understand factors that may protect an individual against the negative effects of stress.

Another stressful context is parenting. Parents have many stressors, both within their own lives as adults and as well as their lives as parents. As with stress generally, parenting stress has been associated with greater risk of anxiety and depression (Quittner, Glueckauf, & Jackson, 1990). Besides the effects of stress on parents, stress can negatively affect the outcomes of their children by damaging their parenting ability and thereby affecting their children (Abidin, 1990; Crnic & Low, 2002). In addition to the potential effects on parenting skills, studies have shown that households with high overall levels of stress, like marital discord, can be distressing for children (Minuchin, 1974).

Unfortunately, studies have shown that parenting stress can be exacerbated by economic disadvantage as well as other contextual factors involved in living in urban areas (Kotchick, Dorsey & Heller, 2005). Low SES parents are particularly at high risk for stress. Because of the negative implications of stress, it is necessary to reduce the psychological burden that stress places on parents. Maintaining social support is a component of one's ability to handle stress. This makes the attainment of social support, as it buffers individuals against stress, particularly important for low-income, urban mothers.

Social Support as a Buffer for Stress

People are social beings. Interactions between people and those around them play a large role in how they handle challenges. This is particularly true in the face of financial strain and other contextual stressors within disadvantaged populations. Social support has been variously defined but for the purpose of this study it is defined as the functional and beneficial (ideally) results of relationships (Vaux, 1988). One way that social support occurs is that individuals receive resources from their social network. These resources are often classified into categories such as instrumental (receiving help with a task), emotional (having a friend be there when someone passes away), tangible (receiving donated food), and informational (receiving advice) (Maulik, Eaton, & Bradshaw, 2010). These different resources are valuable when they fit the need of the receiver.

When the fit of the resource is appropriate, social support is said to have a buffering effect against stress for the individual (Cohen & Wills, 1985). That is, when one's social support network can aid in reducing stress by supplying him/her with exactly what they need, their network is beneficial. When the resource received matches the stressor, the individual will be able to better handle stress. The relationship between social support and stress-related health is close enough that it has been found that making a friend is more beneficial to one's health than quitting smoking (Mcpherson, Smith-Lovin, & Brashears, 2008). Researchers have found that social support, in a parenting specific context, reduces stress (DeGarmo, Patras, & Eap, 2008). Parenting is a difficult job in which stressors are constant and social support is needed.

Social Problem Solving

Because social support is vital to stress management, it is important to understand how to maneuver social relationships in order to maintain a social support network throughout one's lifespan. If an individual is unable to resolve conflicts and issues within relationships, they will lose social support. Social problem solving focuses on the creation of strategies to resolve interpersonal conflict. Platt and Spivack (1972) extensively studied the relationship between the ability to create solutions, or means, for social conflicts and social functioning. Research has shown that social problem solving skills are a moderator on the relationship between life stress and negative outcomes (Goodman, Gravitt, & Kaslow, 1995; Nezu, 1986). When one is able to successfully resolve relational issues, the negative impact of stress is reduced.

An information-processing model that has been applied to social problem solving skills examines the processes and steps involved in social interactions (Dodge, 1986). This model describes social problem solving skills as a unique form of information-processing. Although this model was conceptualized in its application to children, the cognitive processes involved in these skills are still applicable to adult interactions.

The first step is to perceive and encode social cues. This step requires selective attention. One must be able to notice the actions of others. The second step is to interpret the social cues. This step involves perspective taking and theory of mind, the ability understand the mental states of others. One must be able to understand what the other people in the interaction are thinking and therefore be able to interpret their actions, language, and other communication cues. The third step is to create social goals. What

does the person want from this social interaction? The fourth step is to create possible strategies for problem solving. This is the step where cognitive flexibility is necessary for proper social problem-solving. One must be able to create multiple solutions to a given problem, depending on the context. When one solution does not work, one must have the ability to create alternate, varying solutions. The fifth step involves evaluating the previously created strategies. The sixth step is then enacting the response and following through with the strategy. This process then leads to the evaluation by peers and their response. Depending on the response, the cycle may begin again. Although this process seems arduous and intricate, people go through these steps all of the time in social situations, most often without conscious awareness of the process.

As stated previously, this model was created to be applied to children. However, problem-solving capacities are still necessary, if not more so, in adulthood. Situations and problems that are faced in adulthood are more complicated than in childhood and may require a more diverse array of solutions. Therefore, it is necessary to understand what factors are involved in creating diverse solutions to adult conflict. Dodge's model is useful in examining the processes involved in problem solving because it gives researchers specific cognitive processes involved in social interactions to examine. The inability to create additional strategies in the face of social failure will negatively affect social functioning. When faced with social problems, one must be able to create adaptive, successful solutions. However, individual characteristics and abilities may affect this process. One such characteristic is cognitive flexibility.

Cognitive Flexibility

A cognitive factor that plays a role in the ability to successfully maneuver through all situations, particularly in social contexts, is cognitive flexibility. Deficits in cognitive flexibility may lead to an inability to create multiple, relevant solutions to social problems. Although there is a lot of research in the area of 'cognitive flexibility', operationalized definitions seem to vary. For the purpose of this study cognitive flexibility is the ability to change cognitive sets in response to inconsistent and changing external stimuli. It is the ability to think adaptively in all situations regardless of a changing environment (Scott, 1962). By nature of this definition it is clear that cognitive flexibility is crucial for social functioning and network maintenance because the social world is always changing and one must be able to adapt in order to form and maintain relationships with others. When dealing with problems in relationships, the circumstances are rarely the same. Each relational issue that a person may encounter interacting with social partners will be different. Therefore, the person must have the capacity to create solutions that are applicable to the specific context as well as generate others in the face of failure of previously created solutions.

The connection between cognitive flexibility and problem solving is relevant to social cognition and relationships. An inability to think with high flexibility may impair problem solving skills, especially in the context of interpersonal relationships. When problems arise in social situations, the ability to think flexibly is necessary for adaptive and varying responses to these problems.

The Present Study

Because the stress from living in areas of high poverty and high crime have negative results on overall health, mental as well as physical (Mulia, Schmidt, Bond, Jacobs, & Korcha, 2008), social support may be more crucial in this context. It may also be crucial for dealing with parenting stress. Financial strain negatively affects parents' psychological well-being, quality of relationships within the family, and, therefore, child adjustment (Scaramella, Sohr-Preston, Callahan & Mirabile, 2008). Because of the disadvantages faced by these populations, it is important to understand the acquisition of a support network in this specific context. The present study will focus on this population.

The present study examined the link between cognitive flexibility and problem solving skills as they affect social support. It has been argued above that there is a connection between one's cognitive ability to adapt to changing external stimuli, or cognitive flexibility, and their ability to modify their interactions effectively with those around them. This connection, it is argued, leads to the ability to maintain a social support network because successful problem solving should lead to the maintenance of relationships. If someone has high cognitive flexibility capacity they are more likely to be able to resolve issues with others, therefore maintaining healthy relationships and a supportive network. Conversely, if one has lower flexibility in their cognitions, they will be unable to adequately handle relational issues and therefore have less social support.

This study examined two hypotheses. The first is that low cognitive flexibility will lead to lower problem solving skills. The second is that these two factors, low

cognitive flexibility and poor problem solving skills together, will be associated with lower social support.

Methods

Participants

A summary of demographic information is included in Table 1. The present study drew from a larger parenting study (Azar # 5R01HD053713) which sampled mothers from low-income households with at least one child between the age of three and five. Participants were recruited through many agencies throughout Philadelphia including daycare centers and preschool programs. The sample consisted of 42 mothers.

Procedures

Data collection for the larger study was done in three sessions in the mothers' homes. During the first session, study staff overviewed the study and the participants signed consent forms. After consent was given, demographic information was recorded using a background sheet. Then, due to potential literacy concerns, the staff administered study measures orally to the participant. The following measures were collected during the first and second sessions.

Measures

Three primary measures were used to examine the hypotheses: the Wisconsin Card Sorting Test, the General Problem Solving Skills Instrument, and the Social Support Inventory. An additional measure was used in further exploratory analysis and is described below the primary measures.

Wisconsin Card Sorting Test (WCST; Berg, 1948; Heaton, 1981) was used to assess cognitive flexibility. The WCST is known as “the gold standard executive function

task'' (Ozonoff et al. 2005, p. 532). In the WCST, subjects are presented with four stimulus cards. On these cards are shapes varying in color, form and number: one red triangle, two green stars, three yellow crosses and four blue circles. The respondents are then given response cards (consisting of combinations of all of the colors, forms, and in varying numbers) and are instructed to match them to the stimulus cards. The administrator sets a category for the respondent to match on: color, form or number. Without instruction of how to match the cards, the respondents align a response card with a stimulus card and are then told whether they are correct or incorrect. Once the respondent correctly matches a certain number of cards in succession (10), demonstrating their understanding of the rule, the administrator changes the category, without notifying the respondent. It is in these transitions of categories that cognitive flexibility is represented. The ability to recognize that the rule of the task has changed, and the ability to shift to another category, demonstrates flexibility in cognition. If a respondent stays on one categorization after repeatedly being told that they are incorrect, they are giving perseverative responses, demonstrating a lack of cognitive flexibility (Berg, 1948). High scores of perseverative errors indicate low cognitive flexibility. The WCST has shown inter-scorer agreement ranging from .88 to .93 (Axelrod, Goldman, & Woodard, 1992). In previous research, the WCST has shown to correlate with other measures of executive functioning as well as capture the ability to shift processes (O'Donnell, MacGregor, Dabrowski, & Oestreicher, 1994). The WCST is often used in assessment of schizophrenia, a disorder in which impairment in social functioning is a defining factor.

General Problem Solving Skills Instrument (GPSSI; Azar, 2009; adapted from Platt & Spivak, 1975; Hansen, 1989) was used to assess social problem solving skills.

Respondents were presented with dilemmas representative of everyday problems, such as a fight with a partner or boss. They were given the beginning of a dilemma and then told the resolution. The respondents were then asked to create the middle part of the story in which the problem is solved. Responses were recorded verbatim then later coded for solutions given. Number of irrelevant solutions given represents ineffective problem solving. Inter-coder reliability on this instrument was .96.

Social Support Inventory (SSI; Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983) was used to assess the respondents' social network. The SSI assessed both social support network availability as well as satisfaction of support. Participants were asked about their amount of contact with their network and then asked how satisfied they are with that situation. They were asked about different types of contact (phone visiting, in-person visiting, involvement in their neighborhood, etc.). Amount of contact with one's network indicates the availability of resources. Then after each question they are asked how satisfied they are with that situation using one of five options: 'Very dissatisfied', 'Somewhat dissatisfied', 'Somewhat satisfied', 'Very satisfied', and 'other'. For purpose of this study, a composite score was used to measure overall social support. This composite score includes amount of contact with network, phone visits, personal visits etc, as well as satisfaction with amount of contact. The SSI has reliability alphas ranging from .65 to .85. (Crnic & Booth, 1991; Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983). SSI has shown positive correlations with life satisfaction and low stress (Crnic et al., 1983). Previous use of this instrument has shown that social support is a moderator between parenting stress and negative outcomes (Crnic & Booth, 1991).

Demographic Background Sheet. Demographic information was gathered using a background form. Demographics included were age, race/ethnicity, number of children, and income.

Family Resources Scale (FRS; Dunst & Leet, 1987) was used to assess the availability of resources for the family. This 31 item measure asked about the availability of varied resources, including food, housing, money, and health coverage as well as other factors such as “Time for your family to be together” and “Time to socialize.” Respondents were asked how well each need was met on a consistent basis for the family. Responses were on a scale of 1 (not adequate at all) to 5 (almost always adequate). A mean of ratings for all responses was used in analysis to represent overall resources available. The FRS has shown to have good reliability with an alpha= .92 and has worked well for disadvantaged populations (Brannan, Mantueffel, Holden & Heflinger, 2006). The FRS has been found to relate to overall well-being measures (McMillan, Morris & Atchley, 2011).

Results

Descriptive statistics for all study variables are listed in Table 2. To examine the first hypothesis, that cognitive flexibility is related to social problem solving skills, a Pearson's correlation was done. A statistically significant relationship was not found between the WCST and the GPSSI although a trend was present in the expected direction, ($r = .22$, $p = .086$). To examine the second hypothesis, which is that cognitive flexibility and successful problem solving will lead to a more supportive network, a regression was done. Table 4 shows the regression statistics. Perseverative errors in the WCST were entered in step one. The number of irrelevant responses on the GPSSI was entered in step two. An overall composite score from the SSI was entered as the dependent variable. This regression showed no statistically significant results with perseverative responses ($t = .313$, $p = .756$) or irrelevant responses ($t = .400$, $p = .691$). However, a trend was found when a Pearson's correlation was run between the WCST and the SSI ($r = .22$, $p = .085$). Because the results lacked statistical significance, the data was transformed using a natural log function. The data was skewed and this was an attempt to normalize the data. However, when analyses were run with the transformed data, significant results were not found.

In order to understand the lack of statistically significant findings, exploratory analyses were done. Further analysis was done on the SSI in order to check for construct validity. The assumed response pattern would be that those that respond high on contact with their network would be high on satisfaction as well. After a median split on both contact and satisfaction, 25 mothers demonstrated the expected pattern, with either low contact and low satisfaction or high contact and high satisfaction. However, 7 mothers

responded with high contact and low satisfaction and 11 responded with low contact and high satisfaction. This deviance from the expected response indicates that measurement of contact is not the same as satisfaction, and other factors may influence one's satisfaction.

To explore the nature of social support as a buffer, a one-way ANOVA was performed with the varying response patterns on the SSI as the levels of the independent variable and means on the Family Resource Scale (FRS) as the dependent variable. The FRS was used to test the assumption that social support leads to resources, which presumably is a factor in the buffering against stress in disadvantaged populations. A significant difference was found between the means on the FRS between these four groups: high contact and satisfaction, low contact and satisfaction, low contact and high satisfaction, and high contact and low satisfaction. Respondents that were high for contact as well as high on satisfaction had a significantly higher mean on the FRS than the other groups [$F(3,40) = 6.19, p = .002$]. This supports that social support may lead to resources but it also shows that this may be true only in ideal conditions, when contact and satisfaction are both high. Other factors may have an influence on the relationship between one's social network and the availability of resources.

Pearson correlations were run between all study variables in order to further examine the relationships between the variables. These correlations revealed a statistically significant relationship between the FRS and SSI (overall composite score) ($r = .49, p = .001$).

Discussion

The present study set out to explore a cognitive capacity that may lead an individual to have the ability to maintain relationships, therefore maintaining social support. Cognitive flexibility was studied because the ability to change cognitive sets in the face of changing external stimuli should lead to the ability to think, and problem solve, successfully in social relationships. This is crucial as social relationships are constantly in flux. Problem solving was used as the link between cognitive flexibility and social relationships because an individual who is better able to problem solve in social contexts, will, presumably, be better able to maintain healthy relationships. Statistically significant results were not found. However, trends were present that indicate that cognitive flexibility is a contributing factor for the ability to problem solve. There was also a trend present between cognitive flexibility and social support. Potential reasons for lack of statistically significant findings include a small sample size and non-normative data.

Despite the lack of statistical significance in the findings, trends were present that indicate that cognitive flexibility, as measured by a neuropsychological test, may be related to social outcomes. Cognitive flexibility was related to both problem solving and social support. These trends validate the importance of research in social information processing. The low strength of the relationship also points to the importance of an integrative model of social information processing that includes other cognitive factors. As studied by Crick and Dodge (1994), other cognitive factors involved in social information processing include the encoding of social cues, attributions of intent, social

schemas, as well as self-schemas, like self-efficacy. Research should include the combination of cognitive factors as predictors of social support.

It is particularly interesting that these trends were found within an adult population. Most of the research in social information processing is focused on children. However, it is important to look at these factors in adulthood as well. Maintaining friendships and a supportive social network is crucial through all stages of life.

Further examination of the performance on the cognitive flexibility measure showed that the population studied may have difficulties in this realm. The levels of performance on the measure of cognitive flexibility within sample were significantly higher, demonstrating lower cognitive flexibility, than expected for age appropriate scores. The average number of perseverative errors for the age of the sample is 8.93 in the general population (Heaton, Chelune, Talley, Kay, & Curtiss, 1993). As seen in Table 2, the scores found in this sample were significantly higher. Instead of a normally distributed sample, the results were non-normative, with most respondents performing at a lower level than average. This is important for two reasons. First, a near significant correlation was found with cognitive flexibility and social support. Even with non-normative data, and a small N, a trend was present between these two factors. With a more normative, larger sample, statistically significant results may be found. Second, and more importantly, the studied population has significantly lower cognitive flexibility than the general population. If further study shows that cognitive flexibility is associated with better problem solving skills and more social support, mothers with low SES may need social skills training so that they will be better able to maintain a supportive social network. This is particularly relevant to the specific population sampled in the present

study as they have fewer resources therefore, maintaining a supportive network should allow them to have access to better resources for their family. Exploratory analysis showed a significant finding that overall social support was significantly correlated with the Family Resource Scale. The more social support a mother had, the more resources she had for the family. Members of disadvantaged populations need more resources so having a supportive network would be especially important.

In addition to non-normative data and a small sample size, another reason for lack of statistically significant findings may have to do with the social support measure. A composite score, which totaled the amount of contact with network as well as satisfaction with contact, was used in analysis. However, further analysis on the scores showed that a large portion of the sample did not answer as expected. The expectation would be that someone with high contact with their network would be satisfied. However, for over a third of the respondents, this was not the case. Some respondents showed unexpected response patterns. Some respondents were high on contact with their network, while low on satisfaction with their network. Despite regular contact with their network, these respondents were not satisfied. Some respondents were low on contact with their network but high on satisfaction. These respondents were satisfied with fewer interactions with their network.

When further analysis was done on the SSI, and availability and satisfaction were split, analysis showed that those that reported frequent contact and high satisfaction had significantly higher availability of resources. Overall support was correlated with resources but high contact and high satisfaction, when present together, are associated with the most resources. When social support is reported as expected, high levels of

contact with high satisfaction, more resources are available. This further stresses the importance of understanding the dynamics of social support in disadvantaged populations.

Some researchers have defined social support as an “exchange of resources” between two people (Shumaker & Brownell, 1984). The definition used in this study focused on the returns for the individual without consideration on what they give to others in their network. It is possible that the respondents that were not satisfied with high contact with their network give more than they receive within their relationships. It may also indicate that the resources available from their network do not fit their particular needs. For example, if someone is struggling financially, they will not be helped by a network that has no money to spare, regardless of how often they come in contact. This is important because it shows that there is a difference between having a supportive social network and simply having a social network. Resource availability within a network may be a mediating factor in the relationship between contact with network and satisfaction with network. It may also depend on the population being studied. It is possible that in a disadvantaged, low SES population, the availability of certain resources are needed more than others. Perhaps instrumental support is more valuable than emotional support. The measures used in this study did not distinguish between types of resources provided by the network. Further research into the nature of social support, and particularly in low SES populations, should include factors of resource type.

An even more interesting response pattern was seen with respondents who were low on contact with their network, but high on satisfaction. Perhaps these respondents have a history with experiencing a network in which they give more than they receive

and now chose to be more isolated. Another possible explanation is that these respondents have an internal locus of control, which means that they would feel that they are responsible for their outcomes, as opposed to an external force. They may feel that they are independent and do not need others for assistance. Research has shown that people with an internal locus of control tend to have less contact with their network (Sandler & Lakey, 1982). They may simply prefer to not have regular contact with a network.

These unexpected response patterns indicate that measurement of contact is not the same as satisfaction, and other factors may influence one's satisfaction. Contact and satisfaction are not the same and the two should be measured independently. Further study is needed to fully understand what would lead to these unexpected response patterns.

Another trend present was between family resources and cognitive flexibility. This may mean that cognitive flexibility is a factor in gaining resources. The relationship between these three factors, cognitive flexibility, social support and family resources, needs to be examined further. Perhaps it is that cognitive flexibility aids in the attainment of resources, which then allows a person to be appraise their network at satisfactory.

There is little research on friendships and the maintenance of social support outside of developmental psychology with much younger ages. The maintenance of adult relationships is rarely studied. Most of the research in network creation for adults focuses on demographic information as a reason for friendship: similar SES and geographical location (Verbrugge, 1977). This study was an attempt to identify individual factors that are involved, with a focus on cognitive capacities as a driving force. However, other

factors need to be considered. Other factors to consider outside of cognition include, but are not limited to: warmth, aggression, and locus of control.

Overall, there are trends present in the data. Cognitive flexibility was associated with problem solving, social support and resource availability. These relationships were present even with unexpected patterns of results and non-normative data, hinting that they may be more important than this study indicated. Further research is needed to fully understand the relationship between all variables studied. Other factors, that may lead an individual to have social support, need to be identified. However, it is clear that the trends present in this study are important because, in the condition where respondents were satisfied with their network, the family had more resources. This is crucial for mothers in disadvantaged populations.

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Tables

Table 1-

Demographics of Sample

	N (%)	M (SD)
Age (years)		27.56 (6.06)
Income (approximated in \$)		15.593 (7.761.50)
IQ		82.67 (11.77)
Number of Children		2.61 (1.54)
Ethnicity		
African American	33 (75)	
Hispanic	5 (11.4)	
Caucasian/non-Hispanic	1 (2.3)	
Mixed/other	5 (11.3)	

Table 2-

Descriptive Statistics for Study Variables

Measure	Mean	Median	Standard Deviation
Perseverative Errors (WCST)	19.43	16	13.72
Irrelevant Responses Given (GPSSI)	1.88	1	1.75
Overall Social Support (SSI)	75.61	75	11.53
Family Resources (FRS)	3.81	3.81	0.61

Table 3-

Correlations Between Study Variables

Variable	1	2	3	4
1. Perseverative Errors	-	0.22 †	-0.22†	-.18†
2. Irrelevant Responses		-	0.08	-0.06
3. Social Support			-	0.49**
4. Family Resources				-

** p< .01; † p < .10

Table 4-

Regression of Perseveration, Irrelevant Responses and Social Support

Variable	B	<i>t</i>	P
Perseverative Errors	0.052	0.313	n.s.
Irrelevant Response	0.067	0.4	n.s.

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AWARDS

- Best Empirical Poster- Psi Chi Poster Convention **2011**
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RELATED EXPERIENCE

Department of Psychology, The Pennsylvania State University
Research Assistant **2009-Present**
Assist with data collection on site in Philadelphia, PA and coding.

Department of Statistics, The Pennsylvania State University
Teaching Assistant **2009-2010**
Aided students in completion of two weekly labs and hosted review sessions prior to exams.

WORK EXPERIENCE

Staples, Frazer, PA
Copy Center Associate **2005-Present**
Complete projects and orders for customers. Make daily deposits in cash office.

Student Employment, The Pennsylvania State University
Barista **2008-Present**
Stock and maintain café. Make coffee drinks.

MEMBERSHIPS

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