Children's Resilience to Family Financial Insecurity

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Abstract

Approximately 906,000 children are exposed to some form of abuse or neglect in the United States. A wide variety of research has concluded that children who are exposed to harsh kinds of maltreatment will potentially be at risk for a range of problems in childhood, adolescence, and adulthood. Children who are maltreated tend to grow up in family households with multiple problems occurring. Consequently, children's resilience to maltreatment may depend on the total number of stressors that they face, as the fit between the child and the environment is the best predictor of children's psychological well-being.

This research focused on correlations between the economic stressors and household net income of the family and their relationship to the child's cortisol reactivity and mental health stability, as it was predicted that there will be significant correlations between the four variables. Social support or coping mechanisms (Problem Focused Coping and Positive Cognitive Restructuring) were analyzed with the purpose of finding to what degree they modify the relationship between the aforementioned variables. Self-report questionnaires were given to families who had been previously visited by social workers, indicating previous child maltreatment cases. This study found that as the families' economic stressors increased with increasingly low net income, the child's behavioral problems increased, indicating a lower standing of resilience; their cortisol levels increased as well. When coping mechanisms were used effectively the child was seen to have lower cortisol reactivity and was deemed to be resilient. This is useful as it can act as a guide for social workers in encouraging the child victim to hold more resilience to their traumatic event. In addition, the child can become more aware of

coping strategies to be used to incorporate resilient behavior. However, no cause and effect conclusions can be drawn from this study.

Review of Literature

Child abuse is defined as any act of commission or omission on a child (Schumacher, 1999). It can be divided into five subcategories including physical abuse, a force of violence that results in injury, sexual abuse, any unwanted sexual contact, emotional abuse, which is the most long-term of the abuses as it targets a child's psychological abuse, neglect, which is the failure to provide for immediate needs of the child, and ritual abuse, which is a combination of physical and sexual abuse. Approximately 906,000 children are exposed to some form a abuse or neglect in 2003 (US Department of Health and Human Services, 2005). A wide variety of research has concluded that children who are exposed to harsh kinds of maltreatment will potentially be at risk for a range of problems in childhood, adolescence and adulthood (Cicchetti, 1997). Because of this substantial amount of abused children, current research in this field focuses not only on the prevention aspect of maltreatment but also on ways to improve a child's mental state and how one can ensure the best possible outcome for that particular child victim. A child's resilience to any form of the maltreatments stated above was evaluated in this current study.

Resilience is the capacity for successfully adapting to adverse and traumatic life events. It is widely accepted that resilience can only be achieved in children who master normative developmental tasks despite their experiences of significant adversity (Luthar, 2000). Resilience to child maltreatment can be divided into two generalizations. The first, emotional and behavioral problems, pertains to a child's mental health stability and their psychological characteristics. These behavioral problems being addressed are linked to a child's social phobias, anxiety, and other impairments to the mental health. Personality traits of the child with respect to

resilience explains the quota of "doing better than expected" based on any given circumstance. The most common example would be a child who has been previously abused but does not exhibit any aggressive behaviors and attributes (Jaffee, 2008). Concluding remarks of previous studies allude to resilient children being classified as high self-esteem and above-average intelligence. However, this is not the case at all times (Luthar, 2000). Past research continues to support the ideas that resilient children are those who engaged in normative levels of antisocial behavior despite having been maltreated. However, the variables that are uncontrolled by the child, those of the parent, have to be considered when determining a child's resilience (Jaffee, 2008).

Since many potential factors that can cause a child to exhibit resilience are not always perceived through the child, researchers are constantly looking for ways in which individual, family, and neighborhood characteristics distinguish resilient from non-resilient maltreated children. Children's relationships with family members and other members of their social network have been found to promote resilience to maltreatment. Positive family changes and, in some instances, removal to foster care have been associated with an overall better child resilience (Cicchetti, 1997). Children who are maltreated tend to grow up in family households with multiple problems occurring. Consequently, resilience to maltreatment may depend on the total number of stressors that children face as the fit between the child and the environment is the best predictor of children's psychological well-being (Davydov, 2010). Directly pertaining to this current study, economic stressors have been proven to show a significant correlation with a child's resilience to maltreatment. Economic stressors are a form of chronic stress which are caused from continuous secretion of cortisol. Low income, a family's ability to meet its financial needs and wants, and fluctuating periods of unemployment are all key examples of economic

stressors (Robson, 2013). Generally, economic stressors have a negative effect on a child victim's coping strategies.

Cortisol, the "stress hormone," is the main way researchers measure a child's stress level. The stress level of a child has been found to affect a child's resilience negatively (Jaffee, 2008). Stress activates cortisol secretion from the adrenal glands, and if excessive cortisol is being released over a short period of time the pertinent victim goes into a state of chronic stress. As stated above economic stressors is a primary example of chronic stress. High cortisol levels subsequently, can have negative effects on the child's mental health stability. Salivary cortisol is used as a biomarker of stress by many research workers. By evaluating a child's cortisol secretion and cortisol reactivity using psychological questionnaires cortisol reactivity and overall cortisol levels can be collected. Cortisol reactivity is the exposure to real-life stressors or by using laboratory-induced stressors, while the overall cortisol level is the fluctuation of the change in recorded levels based upon different complications.

Throughout research in child abuse many limitations can occur. With self-report questionnaires, many researchers see a bias develop amongst their data. There have been analog tasks developed to protect against this bias. This analog task will ask participants in questionnaires from a wide range of studies, more specified questions, that in ways contradict each other; these analog tasks hope to hinder or eliminate bias amongst these questionnaires (Robsom, 2013). Other limitations in particular with this study include the idea that cause and effect conclusions cannot be drafter due to the hierarchal regression analysis. This analysis is conducted under two conditions: the first being that the main effect was accounted for and the interaction term was determined significant or insignificant.

The current study seeks to determine the degree to which these stressors, economic hardships and income, are associated with cortisol reactivity and a child's resilience. In order to create a more substantial account, modifying variables were needed to be evaluating including two coping mechanisms, positive cognitive restructuring and problem focused coping. Future research should adapt to the inability to construct cause and effect conclusions, and institute stronger questionnaires that ask more concrete questions in order to allow for some usage of the resulting data for way to better the procedures of encouraging resilience to victimized children.

Methods

This study has objectives pertaining to economic stressors, family income, a child's resilience and cortisol reactivity. The research questions are broken up into two different ideals: the first pertaining to defining whether economic stressors or family income are associated with a child's behavioral mental health and cortisol reactivity and to what degree. Subsequently, the study then continues to evaluate the level of modification of social support, or coping mechanisms, on economic stressors, family income, and behavioral mental health and cortisol reactivity.

Based upon previous patterns of behavioral modifiers it was hypothesized that children who experience relatively high levels of economic stressors will have more emotional and behavioral problems and show an increase in cortisol reactivity than children who experience fewer economic hardships. The same verbiage was used when accumulating a hypothesis on lower levels of income and behavioral problems. Second, it was hypothesized that children with higher levels of economic stress and lower income rates will be associated with higher levels of behavior problems and cortisol reactivity for children who have low levels of social support, but not for children who have high levels of social support.

Sample

The Children's Experiences and Development Study was used to create the population of families and their children used in this study. This previous research, conducted overseas, allowed participating families in the past study to engage in a follow up study after their child was three years of age. The sample includes 400 participants in which their families came from primarily socially disadvantaged neighborhoods in the southeast and the northwest of England. These participants were contacted by a research worker and invited to participate. If they agreed, the research worker then continued to schedule a visit in the family's home. These visits typically lasted four hours and occurred in the late afternoon. During the visit, the facilitator explained the purpose of the study and the caregiver and child provided informed consent. The child's caregiver and the child were interviewed and assessed based on several surveys administered. At the completion of this study, the caregiver was given a gift voucher for 35 pounds and the child was given a gift voucher for 10 pounds.

Within the population of participants approximately 51.2% of the sample was male and the remaining 48.8% were female. Consequently, the correlations between the two variables called for a normal distribution on the histograms. The age of the participants ranged from eight years to eleven years. While observing the frequency distributions of the histograms, the data obtained by the participants' ethnicities proved for a diverse sample. However, the child ethnicity histogram was skewed to the right, showing that the diverse population did have some inequalities. Approximately, 69.9% were white, 6.8% were of the African American ethnicity and the remaining percentages were of Asian and other cultural backgrounds.

Measures

Income and Finances

Household income was established by asking the respondent to indicate how much total income the household received from all sources before tax in the previous 12 months. This income was reported by mothers and the total pre-tax income was recorded in UK pounds. Economic hardship, on a materialistic basis, was measured with 4 items using a 6-point scale ranging from 'never' to 'daily' families were asked how often they found it difficult to meet the cost of food and other necessities, rent, mortgage or contribution for keep, bills for things including council tax, insurance or heating, and arbitrary things like having a night out or presents for the family. The alpha coefficient value for these measures was .81 which proves this questionnaire to hold heavy on internal consistency reliability.

Children's Coping Strategies Checklist

Both coping strategies, problem focused coping and positive cognitive restructuring, were measured with a questionnaire that asked children about contending with difficulties. The children were asked to think about how often they used the strategies to solve their problems, make themselves feel better. A 4-point scale was used: 'never,' 'sometimes,' 'often,' and 'most of the time.' To limit the length of the questionnaire and to have the greatest face validity research workers reduced the number of items in each sub-scale to only including the following:

Problem Focused Coping

1. You tried to make things better by changing your behavior.
2. You thought about the best way to handle the problem.
3. You did something to solve the problem.

4. You thought about what you needed to know so you could solve the problem.
5. You thought about what you could learn from the problem.
6. You tried to figure out why things like this happen.

Positive Cognitive Restructuring

1. You tried to think only about the good things in your life.
2. You told yourself things would get better.
3. You reminded yourself that you are a lot better off than some kids.
4. You told yourself that you could handle this problem.
5. You told yourself you could handle whatever happens.
6. You told yourself that a problem would work itself out.

More specifically the two types of coping mechanisms used in this study refer to actively looking for solutions and trying to put a positive frame on the problem regarding problem focused coping and positive cognitive restructuring. The alpha coefficient for the problem focused coping was .68 while the positive cognitive restructuring alpha value was .61.

Cortisol Reactivity

Research workers used the social provocation task in order to obtain cortisol levels in the prospective child. The children sat down in front of a computer game against an online opponent, seen through an interactive video chat. These participants were also attached to a blood pressure recording device. The opportunity to correspond with the facade individual seen through the video chat was the laboratory-induced stress. The cortisol reactivity measure was created using the difference between a child's cortisol levels twenty minutes after the task and the child's lowest cortisol levels prior to the task. The actual cortisol measurements were obtained through

the use of a cotton roll; in which the child's mouth was swabbed by introducing one end of the cotton roll into the buccal cavity.

Behavioral Problems

The mental health stability of the child was evaluated based upon that particular's behavioral problem. These included symptoms of Conduct Disorder (CD) and Oppositional Defiance Disorder (ODD), in which a child is demonstrative of rule breaking, aggressive, and argumentative qualities. The Child and Adolescent Symptom Inventory is a behavior rating scale for defined emotional and behavioral disorders in youths between five and eighteen years old. In this questionnaire there were 79 behavior questions, in addition to the sections at the end in which the parents gave commentary regarding the child's impairment i.e. how often the behaviors in that section interfered with their child's ability to do school work or get along with other people. The scale in total is reliable because of its alpha coefficient value of .87.

*Each measuring questionnaire's subscale score was determined by the summation of each individual's item score.

**An alpha value of about > .7 is considered to be strongly reliable.

Results/Discussion

Following the data analysis this study sought to provide some evidence to determine the extent to which economic hardship and lower income rates are associated with the child's mental health stability and cortisol reactivity levels. It was predicted that there would be association between the four variables only with children who had lower social support or coping mechanisms.

Beginning the research, correlations were analyzed and initial observations were made based upon the frequency histograms and there skewness. A positive correlation was seen between economic hardships and change in cortisol and behavioral problems. A negative correlation was seen between behavioral problems and positive cognitive restructuring. A variable was constructed in the primary steps of the study in order to see its effect on the change in levels of cortisol. Surprisingly, there was no correlation between the use of medication and cortisol levels, as sometimes certain medications can affect a respondent's initial cortisol levels.

A hierarchical regression was conducted to test the main and interactive effects of economic hardships and household income on behavioral problems and economic hardships and household income on cortisol reactivity. The variables were entered at two steps: first at the main effect and second at the interaction term, if further investigation was needed.

Under the application of using behavioral problems as an outcome, throughout all four scenarios no interaction term was found to be significant, however, there were main effects on each of the respective outcomes. As following, economic hardships have a positive effect on behavioral problems and positive cognitive restructuring and problem focused coping have an overall negative effect on behavioral problems in the evaluated children. More specifically the more economic hardships in the family the more behavioral problems the child exhibits. Much to the support of the hypothesis the more effectively a child uses either coping strategies, the less behavioral problems are observed in the child. In terms of household net income, the variable not only has a negative effect on behavioral problems in the child, but also constitutes an overall negative effect of both coping strategies on behavioral problems. Simply, the lower the income of the family the more behavioral problems a child will have and the less the child is able to utilize either coping strategy the more behavioral problems will exist, consequently.

Looking at cortisol reactivity in the child a significant interaction term was seen, though no main effect could be concluded. This significance can be seen on Tables 1-4 when looking at the interaction value; in order to hold some significance it must be higher than .05. Within these regressions the ultimate analysis was of a crossover, which describes the direction of the relationship between the two variables as it changes across groups. Economic hardships have been shown to increase substantially as cortisol reactivity increases only amongst those respondents who scored high on the positive cognitive restructuring and problem focused coping scales. Also shown through regression analysis, economic hardships increase when cortisol reactivity decreases, under the circumstance of those children that scored low on either social support scales. Higher net income in households is associated with low levels of cortisol reactivity only amongst children who scored high on both coping strategy scales. In addition, high income is associated with higher levels of cortisol reactivity only amongst children that scored low on both of the social support scales.

Table 1. Cortisol Reactivity on Household Income and Positive Cognitive Restructuring

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.242	.035		6.907	.000
	ceninc centered income	-.003	.008	-.020	-.382	.703
	cenpos centered postive	.010	.010	.051	.971	.332
2	(Constant)	.241	.035		6.931	.000
	ceninc centered income	-.002	.008	-.016	-.307	.759
	cenpos centered postive	.011	.010	.058	1.113	.266
	cenicpos centered income and positive	-.006	.002	-.143	-2.756	.006

a. Dependent Variable: lncrtcha change in cort from baseline to max (higher = cort incr)

Table 2. Cortisol Reactivity on Household Income and Problem Focused Coping

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.244	.035		6.933	.000
	ceninc centered income	-.003	.008	-.020	-.376	.707
	cenpro centered problem	.001	.010	.004	.083	.934
2	(Constant)	.240	.035		6.829	.000
	ceninc centered income	-.003	.008	-.018	-.336	.737
	cenpro centered problem	.002	.010	.008	.161	.872
	cenicpro centered income and problem	-.004	.002	-.099	-1.885	.060

a. Dependent Variable: lncrtcha change in cort from baseline to max (higher = cort incr)

Table 3. Cortisol Reactivity on Economic Hardships and Positive Cognitive Restructuring

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.238	.034		6.901	.000
	ceneco centered economic	.008	.008	.055	1.076	.283
	cenpos centered postive	.013	.010	.066	1.284	.200
2	(Constant)	.237	.034		6.926	.000
	ceneco centered economic	.007	.008	.044	.856	.393
	cenpos centered postive	.015	.010	.076	1.477	.140
	cenecpos centered economic and positive	.006	.002	.127	2.480	.014

a. Dependent Variable: lncrtcha change in cort from baseline to max (higher = cort incr)

Table 4. Cortisol Reactivity on Economic Hardships and Problem Focused Coping

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.239	.035		6.905	.000
	ceneco centered economic	.008	.008	.056	1.079	.281
	cenpro centered problem	.003	.010	.017	.324	.746
2	(Constant)	.239	.034		6.935	.000
	ceneco centered economic	.008	.008	.052	1.004	.316
	cenpro centered problem	.004	.010	.023	.440	.660
	cenecpro centered economic and problem	.005	.002	.104	2.016	.045

a. Dependent Variable: lncrtcha change in cort from baseline to max (higher = cort incr)

Because of the significant interaction term within cortisol reactivity and its respective variables, an interaction plot was needed. The following procedure was abided by in order to construct the scatter plots of respondents from the low score and high score groups of social supports mechanisms:

Low Score on Coping Scales

Y = (Constant2) + (behavioralcoefficent2*low score)+(interactioncoefficient2*lowscore+(economic/incomecoefficient))*economic/incomelow

High Score on Coping Scales

Y = (Constant2) + (behavioralcoefficent2*high score)+(interactioncoefficient2*highscore+(economic/incomecoefficient))*economic/incomehigh

The tables below represent the measures and required computations for the analysis of interaction plots. In the table, the mean and standard deviations of the positive coping and problem focused coping that were determined by means of regression analysis are shown. The values were determined using the coefficients depicted in the original frequency distributions of the individual variables. Each high score group is in terms of the totaled score on each other the questionnaire's personalized scale. The standard deviation that is used in the equations sampled above, are taken from the sample's frequencies derived from the descriptive step of the methods.

Mean Positive Cog.R	0.0036		
Std. Deviation Positive Cog.R	3.51		
		Low Income	High Income
Low Score Group	−3.5064	0.11783437344	0.28689536544
High Score Group	3.5136	0.38221038144	0.17724577344
Mean Problem Focused	−0.004		
Std. Deviation Problem Focused	3.56		
		Low Income	High Income
Low Score Group	−3.564	0.1828570896	0.2828103696
High Score Group	3.556	0.3236451216	0.1706960016

Mean Positive Cog.R	0.0036			
Std. Deviation Positive Cog.R	3.51			
		Low Economic	High Economic	
Low Score Group	-3.5064	0.245822	0.123126384	
High Score Group	3.5136	0.166847	0.412280184	
Mean Problem Focused	-0.004			
Std. Deviation Problem Focused	3.56			
		Low Economic	High Economic	
Low Score Group	-3.564	0.2677065	0.1818797	
High Score Group	3.556	0.1404365	0.3657537	

This evidence is surprising as it shows first hand that the amount of resilience one has to a certain family background can weigh heavily on the amount of stress a potential child can have. This information can be used later in social groups to help children become aware of these coping mechanisms which can lead to better familial relationships and an overall better adolescent development. Limitations in this study include the ideal that it is hard to address cause and effect conclusions because the current study consisted only of a regression analysis. Therefore, future research in this field should concentrate on more concrete questions to make the information acquired more substantial and reliable. Improvements to this study could also include in depth survey questions under the different coping strategies to compensate for the lack of cause and effect conclusions.

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