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# Child Abduction, Parents' Distress, and Social Support

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This study examines how parents of family and nonfamily abducted children cope with stress due to the disappearance of their child. The results show that all parents experience distress, regardless of whether it was a family or nonfamily abduction. Associated with parental distress are factors such as prior family stress, age of the child, recovery status of the child, and measures of social support. More specifically, helpful support from friends has been found to decrease parents' levels of distress, whereas unhelpful support from family and attorneys may increase distress. Mothers and fathers responded to event circumstances and social support in significantly different ways. The need for further research is discussed in the study's conclusions.

**Keywords:** kidnapping; missing children; stress; buffering hypothesis

Child abduction has become a public social issue that has captured the attention of many in the last 2 decades. Vivid accounts of child abduction are portrayed in the media, particularly of high-profile stranger abductions. Such overrepresentation triggers fear in almost all parents; most often, this fear is disproportionate to the actual risk. Most would agree that child abduction is one of the more stressful types of criminal victimization. Yet, little is known about how parents of victims actually cope with the grief of their child's abduction. Research has shown that the psychological and emotional effects of any criminal victimization can be severe, especially if the crime is a violation of a personal relationship or if it deprives the victims of their sense of personal control (Davis, Taylor, & Lurigio, 1996; Finkelhor & Hashima, 2001; Finkelhor & Ormrod, 2001).

Sparse research findings make it difficult to determine whether family abductions as such are more distressing than nonfamily abductions or if particular characteristics of the event heighten or lessen the impact on the parent. In addition, researchers do not know if the social support systems have any impact on parent's distress. Nonetheless, according to the social-psychological literature, social support is theorized to serve as a buffer to mediate the distress of traumatic situations, such as the death of a loved one, loss of employment, and so on. This study seeks to extend the social-psychological hypothesis by examining if the provision of social support to the parent of an abducted child has an effect on the parent's psychological distress following the incident.

## History of Child Abduction

Child abduction is not a new phenomenon, and other researchers have documented the history of child abduction in the United States (Best, 1990; Fass, 1997; Forst & Blomquist,

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1991). "Child abduction" and "child kidnapping" are terms often used interchangeably. Abduction is the more generic term and will be used hereafter to refer to an incident when a child is taken against his or her will, regardless of the relationship between the child and the perpetrator (Finkelhor & Ormrod, 2000).

Results from the most recent NISMART (National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children) study, conducted in 1999, showed that there were an estimated 797,500 children reported missing in 1999, and of these children 45% were runaways, 7% were missing due to family abduction, 2% were missing due to nonfamily abduction, and the remaining children were missing without explanation (Sedlak, Finkelhor, Hammer, & Schultz, 2002). Most missing children are recovered almost immediately and nearly all are recovered alive. Of those children who are murdered, 90% are killed within the first 24 hours (Hanfland, Keppel, & Weis, 1997).

The most common type of abduction is family abduction, which occurs when a child is taken by a parent or family member, where the event involves intent to deprive a lawful guardian of custodial privileges (Agopian, 1981; Finkelhor & Ormrod, 2000; Hammer, Finkelhor, & Sedlak, 2002). According to NISMART-2, it is estimated that in 1999 about 203,900 children were missing because of family abduction (Hammer et al., 2002).

Family abductions often occur because of dissatisfaction with custodial arrangements following a divorce, marital separation, or the breakup of a nonmarital relationship (Agopian, 1981; Greif & Hegar, 1993, 1994; Hegar & Greif, 1991; Johnston, Sagatun-Edwards, Blomquist, & Girdner, 2001; Plass, Finkelhor, & Hotaling, 1997). Because family abductions may occur in a context of stress and family conflict, the abduction incident can have an additive effect on individual and family stress levels (Greif & Hegar, 1994).

The second type of disappearance, nonfamily abduction, is defined as an incident in which a stranger or nonfamilial acquaintance takes or detains a child without lawful authority or permission from parents or legal guardians (Baker, Burgess, Rabun, & Nahirny, 2002; Finkelhor, Hammer, & Sedlak, 2002). The NISMART-2 estimated that in 1999 there were about 58,200 child victims of nonfamily abduction, or about 2% of all child abductions in that year (Finkelhor et al., 2002; Sedlak et al., 2002). Nearly one third of the perpetrators of nonfamily abductions were strangers to the children (Finkelhor et al., 2002).

The more dangerous type of nonfamily abduction is referred to as stereotypical abduction, or abduction perpetrated by a stranger or slight acquaintance, which occurs in conjunction with ransom, murder, or with the intent to keep the child permanently (Asdigian, Finkelhor, & Hotaling, 1995; Finkelhor et al., 2002). The NISMART-2 estimated that in 1999 less than 1% of all nonfamily abductions were stereotypical kidnappings; in 40% of these kidnappings the child was killed (Finkelhor et al., 2002).

## Distress and Child Abduction

The psychological literature states that the loss of a child is one of the most distressing events an adult can experience (Holmes & Rahe, 1967; Klass, 1988). The loss represents a change in parents' everyday interactions, a redefinition of social roles, or, as some parents describe, a loss of a part of oneself (Conrad, 1998; Klass, 1988). Although most abduction cases are resolved without grave harm to children, the children may still suffer adverse consequences. Parents experience this trauma vicariously with their children, and parents also may struggle with their own feelings of incompetence, guilt, helplessness, or insecurity (Conrad, 1998; Klass, 1988; Rando, 1986). How do parents respond to the stress of the abduction event? This study seeks to answer the question.

***Defining Stress and Distress.*** It is not surprising that parents of abducted children will experience strong emotions, stress, or even distress because of the incident, but what exactly is meant by those terms? Stress is defined as a state of unease that arises from actual or perceived demands stemming from life events and problems (Holmes & Rahe, 1967; McCubbin & Patterson, 1983; Miller, Smerglia, Gaudet, & Kitson, 1998). Stress is an unavoidable part of everyday life, and moderate levels of stress usually do not impair functioning (Thoits, 1995).

The definition of distress, however, is implied in the literature but rarely explicitly defined. Distress results from too much stress, from stress of a traumatic or unavoidable nature, or from individuals' inability to handle stress effectively (Pearlin, 1989). Distress is psychopathological and has been linked to decreased immunity to illness and disease as well as higher rates of clinical depression, loneliness, isolation, and impaired interpersonal relationships (Kennedy, Kiecolt-Glaser, & Glaser, 1990; Lin & Ensel, 1989; Thoits, 1995).

Since this is a first extensive study on this topic, the researcher used a composite scale of distress to explore the effect of the abduction incident on parents' mental health. This scale was measured with a self-reported symptom severity inventory (SCL-90), which measures the psychological and physiological symptomology commonly associated with psychopathology (Derogatis, 1977; Derogatis, Lipman, & Covi, 1976). It is acknowledged that most parents of an abducted child will experience stress mainly because the event is rare and unexpected (Fravel & Boss, 1992). However, for some parents the emotional, legal, psychological, and financial demands are more than they can handle and impair normal functioning.

As mentioned earlier, distress has been correlated with specific symptoms. In addition to the global measure, the researcher utilized subcomponents of the SCL-90 to measure three additional dependent variables—interpersonal sensitivity, depression, and anxiety. These variables are included because the effects of serious life circumstances could be misjudged if they are based on a single outcome (Aneshensel, Rutter & Lachenbruch, 1991; Pearlin, 1989). These variables will be operationalized in the Methods section of the article.

Because it is expected that all parents will experience distress, the first hypothesis tested in this study is as follows: *Parents' overall psychological distress levels, as well as levels of depression, interpersonal sensitivity, and anxiety, will not differ by type of abduction*.

***Social Support and Coping with Distress.*** In general, coping with stress depends upon individual resources for coping with the stressful situation, and social support is a critical resource (Broman, Riba, & Trahan, 1996; Coyne & Downey, 1991; Ensel & Lin, 1991; Thoits, 1995). Social support is the process by which individuals perceive and/or receive aid from others in their social networks, which can increase their ability to manage uncertainty and increase their perception of control of the situation (Cohen & Hoberman, 1983; Lin, Woelfel, & Light, 1985; Miller et al., 1998; Penner, Dovidio, & Albrecht, 2000).

Helpful social support may aid in successful coping because of its role as a buffer in diminishing or lessening the impact of the event on the individual. In the literature on social support, the buffering hypothesis predicts that higher levels of social support will decrease stress-induced pathology and psychological distress (Cohen & Hoberman, 1983; Cohen & Wills, 1985; Lakey & Cohen, 2000; Lin et al., 1985). Social support performs a buffering role when it decreases the impact of the stressful event, when it alters the individual's appraisal of the event as stressful, or when it provides necessary resources to cope with the event (Wills & Shinar, 2000).

***Inconsistencies in the Buffering Hypothesis.*** Although it is intuitive that social support would be helpful to parents coping with their child's abduction, the research on the

buffering hypothesis has produced several inconsistencies. First, researchers note that *perceived* support, rather than received support, has been found to have a buffering effect on outcome measures of self-reported symptomology and depression (Lin, Woelfel, & Light, 1986; Sarason, Sarason, & Pierce, 1990; Thoits, 1995; Vaux, 1988).

Second, stressful events can actually diminish support by forming obstacles to the maintenance of relationships, especially when the stressful situation is prolonged (Vaux, 1988). Because child abduction is so rare, parents are surrounded by individuals who may not know how to appropriately respond to the event. If their efforts do not result in noticeable change, outsiders may become frustrated by their inability to provide helpful support (Silver, Wortman, & Crofton, 1990) and withdraw their support. In addition, outsiders may be more likely to provide support when they believe that the individual could not have prevented the event (Haines, Hurlbert, & Beggs, 1996). In the case of child abduction, outsiders may be more likely to provide social support to parents who experience nonfamily abductions because they may consider family abduction incidents to have been precipitated, in part, by the actions of one or both parents.

A final inconsistency in research on the buffering hypothesis is that perceptions of support and the effectiveness of support may vary by the level of stress the individual is experiencing. If stress is high before the abduction event, parents' resources and available support may be depleted and ineffective (Ensel & Lin, 1991). Consequently, their ability to cope may be impaired, no matter how much social support they receive from others. Controlling for prior family stress may be particularly important in understanding family abductions because of the situations that trigger the event, such as a bitter divorce, contested custody, child or spousal abuse, or extramarital affairs. The events may cause other relationships to change, temporarily or permanently, and social support may be ineffective during those times (Lin et al., 1985).

***Examining Social Support as a Stress Buffer in Cases of Child Abduction.*** The effectiveness of social support, according to the buffering hypothesis, may differ by source or provider; therefore, four sources of support will be examined in this study. The first is family support. Families have lifelong involuntary ties, and therefore, it is likely that in most families support will be present in adverse circumstances (Haines et al., 1996). Nonetheless, family relationships may be colored by events of the past, causing these relationships to be an ineffective source of support.

The "marital bond" is included in this type of support, which is expected to help mitigate an individual's level of distress (Cutrona & Suhr, 1994; Lin et al., 1985; Vaux, 1988). However, an abduction event can strain the marital relationship, especially if one spouse blames the other, thus rendering support from the other spouse ineffective (Broman et al., 1996). Because both persons in the relationship may be overwhelmed and suffering, they may be unable to support each another (Fravel & Boss, 1992; Rando, 1986).

The second source of support examined in the study is friendship support. In some cases, one's friends may provide equal or better support than one's kin (Adelman, Parks, & Albrecht, 1987). Friends can often meet needs that family members cannot because of the different nature of the relationships. In their study of single mothers, Thompson and Ensminger (1989) found that those who reported having a friend as a confidant had statistically lower levels of psychological distress than those without friendship support.

The third source of support examined in this study is support from police. In most cases of child abduction parents look to law enforcement as the main mechanism to recover their child. Support received from the police could affect the parent's confidence in the child's chances of recovery, which, in turn, may affect their distress. However, Dalley's (1993)

study revealed that 60% of parents were dissatisfied with the police investigation of the abduction incident.

Parents may elicit support from an attorney, the final source of support examined in this study, because the abduction violated a custody arrangement, or because investigative protocol dictated that the parent be viewed as a potential suspect early in the search. Little research has examined this relationship; therefore, it is unclear what effect attorneys will have on the distress levels of parents of abducted children.

On account of the contradictory evidence on the buffering hypothesis, the second hypothesis tested in this study is a two-tailed hypothesis: *The evaluation of social support as helpful will affect levels of measured psychological distress among parents of abducted children, regardless of the source of the support*.

## RESEARCH METHODOLOGY

The current analysis examines the levels of psychological distress of the primary parent respondents from 146 families who had a child victim of family ($N = 42$) and nonfamily ($N = 104$) abduction. In all cases, the primary respondents were either the sole custodial parents or one of the custodial parents of the abducted child.

The data were collected 45 days after the disappearance of the child through the administration of an at-home interview and quantitative psychological measurement instruments (Hatcher, 1997; Hatcher, Barton, & Brooks, 1992). Study cases were selected from four confidential field sites in the United States—two governmental agencies and two nonprofit agencies. The parents of family abducted children were randomly selected for participation in the project; all parents of nonfamily abducted children were invited to participate, because this type of incident was more infrequent. It is recognized that all respondents were included in the sample after they utilized the resources of an external agency for help in locating their missing child or coping with the abduction incident. The data may underestimate cases in which the child was missing for a relatively short time or for incidents that the parents judged less serious, or the data may overestimate a population that has more coping resources.

### Dependent Variables

As mentioned earlier, the analyses focus on the four dependent variables designed to capture psychological distress. The first dependent variable, overall distress, is a global severity index, the SCL-90, which is a self-reported symptom severity inventory (Derogatis, 1977; Derogatis et al., 1976). The 90-item inventory measures dimensions of psychological symptomology that the parent may have experienced in the 7-day period prior to the interview. The score of overall distress represents the parents' percentile position relative to the norm. The scale assumes that the norm equals the 50th percentile, established through nonpatient baseline samples, which means that a score of 60 is interpreted as one standard deviation above the mean, and a score of 40 is interpreted as one standard deviation below the mean. The scores were divided by 100 to make them similar in scale to the other variables in the model.

The researcher also estimated models predicting three additional distress measures derived from the SCL-90—interpersonal sensitivity, depression, and anxiety. As with the overall distress measure, the values on these dependent variables are normed scores. These

were included as additional measures because distress may be manifested differentially by type of abduction, and inclusion of multiple outcomes may allow the researcher to better capture that effect. The interpersonal sensitivity variable assessed feelings of inadequacy, self-consciousness, and negative expectations concerning communication with others. The depression variable measured typical manifestations of clinical depression, including a dysphoric mood, lack of motivation and interest, feelings of hopelessness, and thoughts of suicide. The anxiety variable captured symptoms clinically associated with high levels of manifest anxiety, including feelings of nervousness, tension, apprehension, or terror. It is thought that the three selected measures best capture the myriad responses of parents of abducted children, as well as a range of severity in mental health symptomology. Again, the scores of these three measures were divided by 100 to make them similar in scale to the other variables in the model.

## Independent Variables

The type of abduction was included in all analyses as a dummy variable (0 = family abduction, 1 = nonfamily abduction). The abduction measure is the parents' perceptions of the type of incident, and it does not differentiate between suspected or substantiated types of abduction.

***Control Variables.*** Several control characteristics were included in the analyses: sex of the parent (0 = male, 1 = female), education level of the parent (0 = parent did not complete any college, 1 = parent completed some college), recovery status of the child at the time of the interview (0 = not recovered, 1 = recovered), age of the child at the time of the disappearance (measured in years and months), and parents' marital status at the time of interview (0 = unmarried, 1 = married), although it is noted that the parents' marital status measure does not differentiate if the respondent is married to the child's biological parent or to another partner.

These data also control for the level of family stress before the abduction incident, as assessed using McCubbin and Patterson's (1987) Family Inventory of Life Events and Changes (FILE). This is a measure of parents' self-reports of stressful events and normative family transitions experienced by the family within the 12-month period before the interview. It is necessary to incorporate a measure of prior family stress into the model, because families with higher levels of prior stress might have depleted social support resources at the time of the abduction. A researcher's failure to control for prior stress could introduce bias into the estimation of the effects of social support. Moreover, controlling for prior stress accounts for individual differences in stress experiences that are not associated with the abduction incident. The score was divided by 100 to make it similar in scale to the other variables in the model.

***Support Variables.*** The researcher included four variables to determine if the perception of helpful social support from particular sources decreased the parents' levels of distress. The question asked the parents to indicate if they found support from relatives, friends, police officers, and attorneys helpful. If they indicated "yes," they were then asked if the support was greatly, moderately, or minimally helpful. The responses to this variable were dichotomized to a dummy variable so that all evaluations of helpful support received a value of 1, and those of no support received a value of 0.

***Descriptive Characteristics.*** Table 1 shows the descriptive characteristics of the variables included in the study. Independent *t* tests were used to test for significant differences between means on the four dependent variables for family and nonfamily abductions, and

**TABLE 1. Descriptive Characteristics (*N* = 146)**

| | Total | | Family Abduction | | Nonfamily Abduction | |
|---|---|---|---|---|---|---|
| Control variables | *N* | % | *N* | % | *N* | % |
| Abduction type | 146 | — | 104 | 71.2 | 42 | 28.8 |
| Female respondent | 99 | 67.8 | 66 | 63.5 | 33 | 78.6 |
| Some college education | 67 | 45.9 | 50 | 48.1 | 17 | 40.5 |
| Recovered | 68 | 46.6 | 39 | 37.5 | 29 | 69.0 |
| Married respondent | 74 | 50.7 | 49 | 47.1 | 25 | 59.5 |
| | *M* (*SD*) | | *M* (*SD*) | | *M* (*SD*) | |
| Child age at disappearance | 6.47 (4.71) | | 5.73 (3.73) | | 8.32 (6.20) | |
| Prior family stress | 5.60 (3.64) | | 6.13 (3.75) | | 4.29 (3.00) | |
| Support variables | *N* | % | *N* | % | *N* | % |
| Helpful family support | 101 | 69.2 | 66 | 63.5 | 35 | 83.3 |
| Helpful friend support | 101 | 69.2 | 69 | 66.3 | 2 | 76.2 |
| Helpful police support | 135 | 92.5 | 95 | 91.3 | 40 | 95.2 |
| Helpful attorney support | 63 | 43.2 | 58 | 55.8 | 5 | 11.9 |
| Dependent variables | *M* (*SD*) | | *M* (*SD*) | | *M* (*SD*) | |
| Overall distress | 65.5 (11.3) | | 65.8 (11.7) | | 65.0 (10.4) | |
| Interpersonal sensitivity | 60.6 (11.8) | | 61.0 (11.6) | | 59.6 (12.3) | |
| Depression | 65.9 (10.9) | | 66.5 (10.6) | | 64.2 (11.5) | |
| Anxiety | 65.7 (12.1) | | 65.6 (12.3) | | 65.9 (11.8) | |

no significant differences were detected. This indicates that overall, parents experience similar types of distress at similar levels, regardless of type of abduction incident.

In these data, children abducted by family members were younger, on average, at the time of abduction (5.7 years) than children abducted by nonfamily members (8.3 years). This is consistent with the literature, which finds that younger children are more likely to be abducted by family members, and older children by nonfamily members (Dalley & Ruscoe, 2003; Finkelhor et al., 2002; Hammer et al., 2002). Nearly half (47%) of all missing children were recovered by the time of the interview, although a greater proportion of those recovered were children abducted by nonfamily members (69% recovered), whereas the recovery rate for family abducted children was 38%.

Compared to parents who experienced a nonfamily abduction, parents of family abducted children had higher levels of stress in the 12-month period preceding the abduction, yet the values were not significantly different from parents of nonfamily abducted children. Families in this study experienced mid-range levels of stress before the abduction, compared to that recorded in normative data (McCubbin & Patterson, 1987).

Fifty-one percent of the parents in the sample were married, although this rate was higher for parents who experienced a nonfamily abduction (60%) compared to parents who experienced a family abduction (47%). Most parents for both types of abductions reported helpful support from family (69%), police (93%), and their friends (69%), but parents from families with children missing due to family abduction were 44% more likely to report helpful support from attorneys.

## Methods

Because this is one of the first studies to explore the relationship between child abduction and social support, the researcher used ordinary least squares (OLS) multiple regression analysis. Residuals from the researcher's estimated models were examined to investigate departure from OLS assumptions. Variance inflation factors were used to test for multicollinearity, and none surpassed the threshold to indicate intercorrelations among the variables. Cook's distance was used to explore the presence of any influential cases in the study sample, and none were detected.

The residuals for the regression model were plotted against the continuous independent variables (prior family stress and age of child at disappearance), and Goldfeld-Quant tests were conducted to test for heteroscedasticity. Age of child was not heteroscedastic, but prior family stress was. Heteroscedasticity does not bias the estimators, but does pose problems of their efficiency (Long & Ervin, 2000). Therefore, the researcher estimated regression parameters using OLS multiple regression with White's heteroscedasticity consistent covariance matrix, which provided a consistent estimator of the covariance matrix of the regression coefficients (Long & Ervin, 2000).

# RESULTS

Bivariate correlations are shown in the Appendix. The correlations reveal that the four dependent variables were highly and statistically correlated to one another ($p < .01$). Nonfamily abductions were correlated to higher rates of recovery, lower levels of family stress prior to the incident, children who were older at the time of the abduction and lower levels of attorney support.

## Effects of Control Variables

Table 2 shows that, across all models, those parents with high levels of stress prior to the incident had high levels of distress following the abduction. Given the researcher's previous reasoning for controlling for prior family stress in the analyses, this finding was expected.

Those parents who had younger children abducted had higher levels of interpersonal sensitivity ($p < .01$) after the abduction. The effects on overall distress and anxiety were only marginally significant ($p < .10$). Following an abduction episode, it is likely that parents feel vulnerable or judged by others as ineffective in protecting their children; this reaction is probably heightened for parents of younger children, who are less able to protect themselves or take positive actions to affect their own well-being (Finkelhor & Asdigian, 1996).

Those parents whose children were recovered had decreased levels of depression ($p < .01$), with marginally significant decreases in anxiety and overall distress ($p < .10$). Life may not return to normal immediately after the return of the child, but recovery most likely decreases parents' uncertainty, worry, and the expended energy involved in the search for their missing child.

## Effect of Type of Abduction

As shown in Table 2, parents who experienced nonfamily abductions reported greater anxiety ($p < .05$) than respondents who experienced a family abduction. Anxiety may be higher for parents of nonfamily abducted children because they are less likely to know with whom

**TABLE 2. Distress Outcomes Regressed on the Independent Variables (*N* = 146)**

| | Model 1 Overall Distress | Model 2 Interpersonal Sensitivity | Model 3 Depression | Model 4 Anxiety |
|---|---|---|---|---|
| | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) |
| Abduction type | | | | |
| Nonfamily abduction | 4.26‡ | 4.13 | 3.13 | 5.46* |
| | (2.44) | (2.73) | (2.32) | (2.43) |
| Control variables | | | | |
| Female respondent | 1.09 | 3.28‡ | -0.75 | -0.29 |
| | (2.11) | (1.92) | (2.27) | (2.24) |
| College | -2.63 | -0.69 | -1.61 | -2.84 |
| | (1.77) | (1.87) | (1.81) | (1.93) |
| Recovered | -3.05‡ | -3.03 | -5.04** | -3.71‡ |
| | (1.86) | (2.00) | (1.82) | (1.96) |
| Prior family stress | 0.96*** | 0.79** | 0.92*** | 0.99*** |
| | (0.27) | (0.29) | (0.27) | (0.26) |
| Child age | -0.37‡ | -0.64*** | -0.26 | -0.40‡ |
| | (0.21) | (0.20) | (0.22) | (0.24) |
| Married | -0.96 | 0.27 | -0.59 | -0.63 |
| | (1.85) | (1.97) | (1.84) | (2.00) |
| Support variables | | | | |
| Family support | 3.73‡ | 3.64 | 2.15 | 4.70* |
| | (2.27) | (2.50) | (2.15) | (2.37) |
| Friend support | -3.49 | -5.19* | -3.17 | -1.78 |
| | (2.21) | (2.23) | (2.06) | (2.33) |
| Police support | -4.73 | -6.84 | -3.83 | -1.54 |
| | (3.56) | (4.33) | (3.39) | (3.53) |
| Attorney support | 4.11‡ | 4.51* | 3.05 | 4.38* |
| | (2.18) | (2.30) | (2.16) | (2.25) |
| Intercept | 66.16 | 63.96 | 68.30 | 62.22 |
| $R^2$/adj. $R^2$ | .218/.154 | .241/.179 | .216/.151 | .225/.161 |
| *F* | 3.40*** | 3.88*** | 3.35*** | 3.54*** |

‡$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

their children are after the abduction occurs. Parents who experienced a family nonfamily abduction also reported greater overall distress, but the effects were only marginally significant ($p < .10$). Type of abduction did not have a statistically significant effect on either interpersonal sensitivity or depression. When the model was split and run by type of abduction the results did not differ dramatically from the combined model.

The results, therefore, are more suggestive than definitive with regard to the first hypothesis that parents' overall psychological distress levels, as well as levels of depression, interpersonal sensitivity, and anxiety, would not differ by type of abduction. When controlling for other variables in the model, parents who experienced a nonfamily abduction had significantly higher levels of anxiety than parents who experienced a family abduction, but only marginally significant effects were detected for overall distress, and no significant

effects were detected for interpersonal sensitivity or depression. Mean differences in type of abduction for all four dependent variables were insignificant as well.

## Effects of Social Support

As stated in the second hypothesis, it was expected that the evaluation of social support as helpful would affect levels of measured psychological distress among parents of both types of abducted children, regardless of the source of the support. As Table 2 shows, social support did affect psychological distress in both directions. Friendship support decreased the levels of interpersonal sensitivity (Model 2), whereas friendship support increased the levels of the other three dependent variables. Family support, as shown in Model 4, significantly increased anxiety for parents of abducted children ($p < .05$) and had a marginally significant positive effect on overall distress ($p < .10$). In other words, even though the parent defined the support from family as helpful, the parent still had escalated levels of anxiety.

A similar direction was noted for support from attorneys. For both types of abduction, support from attorneys deemed helpful by parents increased interpersonal sensitivity ($p < .05$) and anxiety ($p < .05$) and had a marginally significant positive effect on overall distress ($p < .10$). It is counterintuitive that support evaluated as helpful by the parent would actually increase his or her distress. It may be that support from family and attorneys actually increases psychopathology, with the involvement of family and attorneys making parents more anxious or sensitive to the opinions and expectations of others. In addition, parents may perceive blame from these sources for failing to protect their children from the abduction. Conversely, this finding may detect a difference in the actual support behaviors provided by these sources, which will be discussed in greater depth in the concluding remarks.

The four dependent variables included in this analysis varied in severity. For depression, a common indicator of mental health that is judged as more severe than some of the other measures, no effects of social support were noted by type of abduction. Nonetheless, effects were noted for interpersonal sensitivity and anxiety, which may be viewed as mental health outcomes that are lower in severity than overall distress and depression.

## Effects of Sex of Respondent

In Table 2, the effects of sex of the respondent were insignificant across virtually all models, save a marginal effect of sex on interpersonal sensitivity ($p < .10$). Acitelli (1996) and Pearlin (1989) indicate that effects of stressors and perceptions of support may vary by sex; therefore, the researcher ran separate analyses for male (fathers) and female (mothers) respondents. As shown in Table 3, it was found that several variables operate differentially for fathers and mothers. First, when controlling for type of abduction, the recovery of the child reduced all distress measures for mothers, whereas the effect on fathers was insignificant for all measures. Prior family stress had a similar effect, increasing distress for mothers across all distress measures, but having a marginally significant effect ($p < .10$) for fathers on depression. Conversely, the age of the child at the time of disappearance mattered most for fathers and their resulting overall distress, interpersonal sensitivity, and depression, whereas age mattered only marginally for mother's interpersonal sensitivity.

Most interesting is the first appearance of significance of the police support variable. Recall that in Table 2 police support never reached significance. However, when running separate models by sex of parent and controlling for type of abduction, police support significantly reduced overall distress ($p < .05$), interpersonal sensitivity ($p < .05$), and

**TABLE 3. Distress Outcomes Regressed on the Independent Variables by Sex of Respondent (Female $N = 99$, Male $N = 47$)**

| | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 |
|---|---|---|---|---|---|---|---|---|
| | Overall Distress | | Interpersonal Sensitivity | | Depression | | Anxiety | |
| | F | M | F | M | F | M | F | M |
| | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) | Coeff. (*SE*) |
| Abduction type | | | | | | | | |
| Nonfamily abduction | 3.87 | 2.42 | 3.34 | 5.14 | 3.05 | 0.08 | 4.64‡ | 5.28 |
| | (2.75) | (4.29) | (3.11) | (4.43) | (2.48) | (4.78) | (2.67) | (4.60) |
| Control variables | | | | | | | | |
| College | -0.69 | -4.92 | 1.16 | -3.67 | 0.02 | -2.90 | -1.53 | -1.65 |
| | (2.01) | (3.62) | (2.41) | (3.04) | (2.03) | (3.64) | (2.31) | (3.90) |
| Recovered | -6.34** | 2.60 | -4.48‡ | -2.10 | -8.10*** | -0.22 | -7.70*** | 5.87 |
| | (2.17) | (4.10) | (2.46) | (3.88) | (2.04) | (4.16) | (2.24) | (4.28) |
| Prior family stress | 0.98*** | 0.84 | 0.87** | 0.39 | 0.80** | 1.34‡ | .94*** | 1.18 |
| | (0.28) | (0.62) | (0.33) | (0.56) | (0.27) | (0.68) | (.26) | (.60) |
| Child age | -0.12 | -0.94* | -0.50‡ | -1.01** | 0.03 | -0.87* | -0.20 | -0.60 |
| | (0.22) | (0.39) | (0.26) | (0.33) | (0.23) | (0.40) | (0.47) | (0.43) |
| Married | -0.62 | -4.76 | 0.11 | 0.35 | -0.59 | -5.77 | 0.22 | -5.09 |
| | (2.08) | (3.64) | (2.54) | (2.81) | (1.95) | (4.01) | (2.31) | (3.89) |
| Support variables | | | | | | | | |
| Family support | 2.90 | 6.19 | 2.19 | 6.80 | 0.93 | 5.68 | 3.78 | 8.22‡ |
| | (2.61) | (4.40) | (2.97) | (4.17) | (2.47) | (4.25) | (2.70) | (4.46) |
| Friend support | -4.34 | -5.15 | -5.92* | -6.55‡ | -4.20‡ | -3.31 | -2.77 | -3.84 |
| | (2.76) | (3.77) | (2.96) | (3.53) | (2.42) | (3.58) | (2.95) | (3.81) |
| Police support | -0.91 | -10.17* | -2.79 | -9.81 * | 2.35 | -10.89** | -1.76 | -5.96 |
| | (5.08) | (4.07) | (6.12) | (4.83) | (5.44) | (4.01) | (3.08) | (4.36) |
| Attorney support | 4.41‡ | 2.17 | 4.30 | 4.14 | 3.14 | 0.81 | 4.39 | 4.50 |
| | (2.64) | (3.08) | (2.90) | (3.51) | (2.49) | (3.11) | (2.77) | (3.16) |
| Intercept | 63.66 | 77.02 | 63.89 | 70.63 | 62.84 | 77.29 | 63.84 | 63.25 |
| $R^2$ | .255 | .370 | .216 | .420 | .260 | .363 | .266 | .364 |
| $F$ | 2.68‡ | 3.23** | 2.99* | 3.41** | 2.98* | 2.66* | 2.88* | 3.24* |

‡$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

depression ($p < .01$) for fathers but had no significant effects on distress for mothers. Thus, police support is a very important mechanism for fathers coping with the abduction of their children.

## DISCUSSION AND CONCLUSIONS

Researchers have a limited understanding of how families cope with the impact of criminal victimization. Even less is known about coping with child abduction. This study finds that even though the abduction of a child is an obviously stressful event, certain factors affect the likelihood of parents being in a state of distress about the abduction. Specifically, prior family stress, age of the child, recovery status of the child, and some providers of social support affect parents' levels of distress.

In this study, all parents who had a child abducted experienced interpersonal sensitivity and depression after the incident. Only the anxiety measure was elevated for parents who experienced nonfamily abductions. Although family and nonfamily abductions are categorically different events precipitated by very different circumstances, it is important to note that both types of abduction are distressing for parents, regardless of the circumstances.

In addition, although the victimization of one's child is a stressful and traumatizing event, not all parents experienced distress about the incident. Recovery of the child and helpful support from friends helped to mitigate the effect of the event on the parents' psychological well-being. Police support was particularly beneficial for fathers of abducted children.

This study demonstrates that it is important to dissect dimensions of psychological distress when looking at families coping with child abduction. In this study, the low-range outcomes of interpersonal sensitivity and anxiety detected more effects than the more severe measures of overall distress and depression. Interpersonal sensitivity and anxiety measures captured feelings and perceptions that are less symptomatic of clinical distress and represent feelings or perceptions that may be common among stressed populations. Therefore, it may be necessary to use measures that vary in severity in order to capture effects in this population.

There are findings that require further explanation. Support from family deemed helpful seemed to increase the respondents' levels of anxiety, and support from an attorney seemed to increase the respondents' levels of interpersonal sensitivity and anxiety. Perhaps parents feel judged for their role in the incident, or they feel that their relatives and attorneys do not understand or accept their feelings and behaviors that stem from the abduction incident.

Another possible explanation may be that the types of support have a greater effect than the sources of support. Sarason, Pierce, and Sarason (1990) stated that it is reasonable to expect that different sources will provide different types of support. The social support literature commonly differentiates between instrumental (e.g., financial assistance) and emotional forms of support (e.g., listening, expressions of concern, companionship) (Cohen & Wills, 1985; Miller et al., 1998; Penner et al., 2000). Perhaps family and attorneys provide tangible support, such as legal help or financial help, and friends provide emotional support, such as intimacy and acceptance. In essence, it may be the type of support, rather than the source of support, that influences the true effect. Unfortunately, the data used in this study do not inquire into the form of support provided and do not include any measures of support perceived or received.

This is a first comprehensive study in this area, and the results should only be used to direct further research. The small sample size ($N = 146$), as well as the low levels of variation

in some variables, limits the statistical power to detect main effects and interaction effects. In addition, it could be argued that data collected 15 years ago are outdated, especially because of increased awareness, publicity, and public support for families responding to abductions, and changes in laws relating to child abduction. The use of mass media as well as several recent high-profile cases have made missing children a well-known, and highly feared, social problem. Support resources may be of a different nature and availability than they were 15 years ago. However, because this is a first comprehensive study on the topic, the data serve as an adequate starting point. Contemporary data should be used in the future to detect comparable effects.

Additionally, this analysis would have been strengthened if qualitative data existed that could have supplemented the subject responses. The social support relationship as well as the ways parents cope with abduction may be so complex that data from a single interview may fail to grasp the intricacies of how the abduction changed existing relationships, affected new relationships, and altered perceptions of daily events and difficulties. No qualitative data were available to enhance the information acquired from the parents' survey responses.

Future research should explore the relationship between social support and parents' distress following child abduction in greater depth. As mentioned, the inclusion of type of support measures would vastly improve our knowledge of how parents cope with the abduction of their children. The source of support may not be the critical piece of the puzzle, but rather it is the type of support offered to the parents or perceived as available. Drawing on the buffering hypothesis, future research should inquire into source of support and type of support in an effort to understand better how parents cope with the abduction of their children. Additionally, future analyses should be conducted to determine how circumstances of the abduction event affect parental distress over time to determine whether the intensity of distress changes, controlling for the recovery status of the child.

Very little is known in general about the long-term consequences of abduction on the victim and the family unit. Because this is a rare dataset, with interview data from parents and children shortly after the abduction incident, a follow-up study of the children, parents, and siblings should be undertaken to look for psychopathological consequences of the event. The original study was conducted in the late 1980s, so revisiting the children and families more than 15 years later could shed light on the adverse consequences of abduction and victimization, particularly for families who never recovered their children, for children who were recovered but might have suffered emotionally or physically during the incident, and for siblings who might have been affected directly or indirectly by the incident.

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**APPENDIX. Correlation Matrix, Pearson's *r* (*N* = 146)**

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Overall distress | 1.0 | | | | | | | | | | | | | | |
| 2 | Interpersonal sensitivity | .83*** | 1.0 | | | | | | | | | | | | | |
| 3 | Depression | .91*** | .76*** | 1.0 | | | | | | | | | | | | |
| 4 | Anxiety | .89*** | .65*** | .77*** | 1.0 | | | | | | | | | | | |
| 5 | Nonfamily abduction | -.03 | -.05 | -.10 | .01 | 1.0 | | | | | | | | | | |
| 6 | Female | -.03 | .02 | -.11 | -.05 | .15* | 1.0 | | | | | | | | | |
| 7 | Some college | -.07 | .004 | -.01 | -.06 | -.07 | -.07 | 1.0 | | | | | | | | |
| 8 | Recovered | -.15* | -.15* | -.25*** | -.16* | .29*** | .11 | -.06 | 1.0 | | | | | | | |
| 9 | Prior family stress | .29*** | .27*** | .30*** | .27*** | -.23*** | .02 | .18** | -.04 | 1.0 | | | | | | |
| 10 | Child age | -.21** | -.28*** | -.17** | -.21*** | .25*** | .03 | -.02 | -.02 | -.27*** | 1.0 | | | | | |
| 11 | Married | .03 | .05 | .05 | .06 | .11 | -.12 | .06 | -.04 | .17** | .16* | 1.0 | | | | |
| 12 | Family support | .17** | .15* | .11 | .24*** | .20** | -.02 | -.07 | -.09 | -.10 | -.004 | .14* | 1.0 | | | |
| 13 | Friend support | -.02 | -.06 | .05 | .06 | .10 | .21** | .08 | -.03 | .13 | -.10 | .11 | .23*** | 1.0 | | |
| 14 | Police support | -.10 | -.12 | -.13 | -.02 | .07 | .19** | .06 | .16** | -.06 | -.11 | -.13 | .09 | .09 | 1.0 | |
| 15 | Attorney support | .20** | .21** | .20 | .22*** | -.40*** | -.23*** | .17** | -.23*** | .13 | -.24*** | .06 | .25*** | .15 | .09 | 1.0 |

*$p < .10$ (two-tailed). **$p < .05$ (two-tailed). ***$p < .01$ (two-tailed).