Women, Aging, and Post-Disaster Stress: Risk Factors*

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The goal of this research was to model the relationship between stress and natural disasters, with a view to explaining levels of stress among women. Following flooding in Iowa in 1993, two in-depth questionnaire surveys were administered, one to residents in high flood exposure areas, and another to the general population as a control. Results indicated that gender plays a significant role in interpreting stress responses to natural hazards, with women consistently exhibiting greater stress than men. However, it was evident that a complex web of factors influenced stress levels including marital status, structure of the family unit, age, socio-economic status, health, levels of social involvement, and degree of hazard experience. These findings suggest that more research should focus on determining structural constraints that exacerbate stress levels for women.

There is a substantial literature looking at relationships between age and hazards (Huerta and Horton 1978; Bolin and Klenow 1982-1983; Cutrona et al. 1986; Krause 1987; Phifer and Norris 1989; Russell and Cutrona 1991). Many of these studies suggest that older individuals may experience more stress and relatively greater personal loss than younger persons during disasters.

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However, our research has produced some conflicting results to these earlier findings. The issue of age is mitigated by physical and mental health conditions that significantly influence stress responses (Ollenburger and Tobin 1995; Tobin and Ollenburger 1994). For instance, individuals in poor health, and who have difficulty getting around, are restricted in the actions they can take to mitigate hazard losses, which can lead to higher stress levels.

In addition, gender interacts with age since older individuals, especially those living alone, are proportionately more likely to be women. Furthermore, the economics of aging place many women in extremely vulnerable positions, which influences their ability to cope with the unexpected consequences of natural disasters. This economic vulnerability of women, who may be the sole support for themselves and/or for their children, has been described as the feminization of poverty (Ollenburger and Moore 1993). It reflects the economic position of women throughout the life cycle from teenage unemployment to the loss of economic support when divorced or widowed. The cumulative effects of unpaid care-taking roles, part time employment histories, lack of consistent benefits, and the economic losses due to divorce or widowhood are exacerbated throughout the life course and leave many older women with little or no economic security for their later years. Consequently, natural disasters can perpetuate the poverty trap for women as demonstrated by some of the recent research looking at women and other marginalized groups in hazardous areas (see, for example, Cutter 1995; Enarson and Morrow 1998; Khondker 1996; Melick and Logue 1985-1986; Rivers 1982; Wiest et al. 1992).

The goal of this research is to develop a model of community and individual characteristics that will provide a framework through which long-term impacts of hazardous events can be more fully understood. The current focus on personal stress responses to flooding, especially those associated with older women, is part of a larger longitudinal survey of how stress and anxiety fluctuate over time and under different hazardous conditions.

**Research Methodology**

A detailed investigation was undertaken of flood victims in Des Moines, Iowa, in 1993; this cohort was subsequently described as the high exposure group. First, a stratified random sample of flood victims was drawn based on census records, large-scale maps, and telephone directories, and an introductory letter mailed to prospective respondents. An in-depth telephone questionnaire was then administered by trained interviewers from the Center for Family Research in Rural Mental Health at Iowa State University approximately four months after the flood. One hundred and six questionnaires were
successfully completed with each interview lasting up to 40 minutes. There was a refusal rate of 15 percent.

Three months later, a large-scale control survey was undertaken in Des Moines and surrounding communities. This survey, again conducted by the Center for Family Research in Rural Mental Health, incorporated many of the same items of the original survey as well as further questions concerning psychological morbidity and level of flood exposure. A total of 1,735 surveys were completed; these served as the control group.

The survey instruments included questions on personal and family characteristics, socio-economic traits, details on flood experiences, individual lifestyle, physical and mental health status, and several standard measures of stress. Health effects were ascertained using several standard techniques including a portion of the Rand 36-Item Health Survey from the Rand Health Sciences Program (Hays and Hays 1992; Stewart and Ware 1992; Ware and Sherbourne 1992). Screening questions were used to determine anxiety, depression, and post-traumatic stress disorder (McFarlane 1988; Steege and Gentry 1990), and a nine item scale from the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff 1977; Bumam et al. 1988) was used to rate depression. Finally, an “impact of events” scale was utilized to assess more carefully the psychological response to traumatic life events (Zilberg et al. 1982).

The Study Area

The Des Moines metropolitan area has experienced many small floods in the past, especially in the neighborhoods of Valley Junction and Frisbee Park, when Walnut Creek, the Raccoon River, and the Des Moines River have moved out of their banks. In 1993, the flooding was particularly severe with many buildings under ten feet of water and a number of homes and businesses completely destroyed. By the end of summer, 2,100 residences and 350 businesses had been inundated (Bryson 1994), and total losses in Des Moines were estimated to be $716 million (Tobin and Montz 1994; Wegner et al. 1993).

Results

Background Information

The questionnaire surveys provided valuable baseline data on the immediate impacts of the flooding on residents (Table 1). Not surprisingly, there were several differences between the two groups. Residents in the high exposure area were most directly affected by the flooding, although many in both
Table 1.
Characteristics of Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group</th>
<th></th>
<th>High Exposure Area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>19 to 91</td>
<td>23 to 85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Age</td>
<td>52.13</td>
<td>52.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married or Living Together</td>
<td>67%</td>
<td>62%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced or Separated</td>
<td>11%</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>14%</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>8%</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>34%</td>
<td>43%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>66%</td>
<td>57%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF PEOPLE IN HOUSEHOLD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lives Alone</td>
<td>22%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two people in house</td>
<td>37%</td>
<td>32%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three people in house</td>
<td>15%</td>
<td>23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four or more</td>
<td>26%</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMPLOYMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time</td>
<td>51%</td>
<td>48%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part Time</td>
<td>13%</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>25%</td>
<td>27%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homemakers</td>
<td>6%</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>3%</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disabled, Student, Other</td>
<td>2%</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUCATIONAL ACHIEVEMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than High School</td>
<td>10%</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Degree/GED</td>
<td>37%</td>
<td>54%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 yr Degree/Voc. Tech Degree</td>
<td>31%</td>
<td>16%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>16%</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLOOD IMPACT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House Flooded</td>
<td>13%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property Flooded</td>
<td>20%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Flood Experience</td>
<td>18%</td>
<td>37%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLE SIZE (n)</td>
<td>1735</td>
<td>106</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
groups experienced access problems because of flood water. Many residences were extensively damaged, and repair estimates ranged from a few dollars to $80,000; 66 percent in the high exposure area stated that it would cost more than $10,000 to repair the damage. The median cost estimate for repairs for this group was $17,000 (Tobin and Ollenburger 1996).

Relief was forthcoming from a variety of sources, including financial compensation through the U.S. Federal Emergency Management Agency (FEMA), from state emergency agencies, and from volunteer organizations. However, only 43 percent of the high exposure respondents were insured against flood losses. The presence or absence of insurance or relief aid to cover losses may play an important role in alleviating or aggravating post-hazard stress.

Risk Factors

Gender and Age

Women experience heightened risk exposures during natural disasters as a result of various societal and cultural norms including gender inequity and overall social roles (Fothergill 1996). The two primary influences on this risk exposure are women’s care-taking roles in the family and women’s overall socio-economic status. Women are more likely to be living in poverty and have fewer economic alternatives to cope with the effects of a hazardous event. In addition, elderly individuals may also have heightened risk factors due to health difficulties and limitations in mobility. Since the life expectancy for women is longer than for men, aging and gender issues are interconnected.

Family Living Environments

Data on family living environments showed several significant differences between the situations for men and women that might affect stress levels. For instance, in the high exposure group, 75 percent of men compared to 59 percent of women were married. Women were much more likely than men to be widowed (19.2 percent compared to 1.8 percent) or divorced (12 percent compared to 8 percent) [$\chi^2 = 28.42$, df=6, p<.001]. There was also a significant difference between marital status and number of people in the household ($F=20.70$, df=2, p<.001). Individuals who were married or living together averaged 3.08 persons per household; individuals who were separated, divorced, or widowed averaged 1.90; and those who were never married averaged 1.71 household members. The average age of individuals living alone was 59 years, and, not surprisingly, more women (23 percent) than men (15 percent) were in this situation. There was also a correlation between age and number of members in the household with the oldest age groups having one or just a few members ($F=7.4967$, df=8, p<.0001).
These data reinforce the notion regarding the vulnerability of women, particularly of those who reside in disaster prone areas. First, women living alone are more likely to be divorced, separated, or widowed, whereas men living alone are more likely to be single. Also, men who live alone are more likely to be younger, and women living alone are more likely to be older. In addition, divorced women are more likely to be heading households with two or more individuals. This reflects the trend of men being more likely to remarry and women, as they age, being less likely to remarry. Also, women are primarily responsible for childcare responsibilities, especially after a divorce.

Health Status

Three groups of variables pertaining to health (physical health characteristics, physical mobility, and mental health characteristics) were collected from both cohorts. Physical health data were derived from a series of questions that focused on general health criteria such as number of visits to the doctor, number of days stayed in the hospital, medicines taken, types of illnesses, and so on. These data were used to provide a composite picture of respondents’ overall health characteristics.

Responses to these questions revealed a significant relationship between gender and health. Men were more likely to indicate their health was excellent or good, whereas a larger percentage of women indicated their health was only fair or poor [$\chi^2 = 7.73$, df=3, p<.05]. Similarly, there was an inverse relationship between age and health status. The average age of individuals who indicated their health was excellent or good was significantly younger than for individuals who indicated their health was fair or poor [$F=13.48$, df=3, p<.001]. Thus, the inter-relationships between age, gender, and physical health results in potentially more stress attributes for women. Women were significantly more likely to have poor health, and they were significantly more likely to have experienced health limitations which in turn affects their mobility [$\chi^2 = 18.98$, df=2, p<.001].

Since women were more likely to have health limitations which affect their mobility, it is logical that they were also significantly more likely to have moderate or extreme limitations to their mobility compared with men [$\chi^2 = 13.04$, df=4, p<.01]. Again, age plays an important role in explaining the relationship between the extent of the limitations and gender [$F=2.49$, df=4, p<.05]. Those respondents who indicated that their limitations were moderately severe generally were older.

Economic Status

There was a significant difference in the economic status of men and women. In the control group, 70 percent of men and only 45 percent of women
were employed full-time, while 10 percent of the women were employed part-time compared to 5.4 percent of the men prior to the Midwest floods. Also, women were significantly more likely than men to be retired or disabled \( \chi^2 = 15.28, \text{df} = 3, p < .002 \). The data showed clearly that women consistently had lower incomes than men. Of the high exposure group, 19 percent reported that they were temporarily out of work, and an additional 13 percent were permanently out of work as a consequence of the flood. Of these, 92 percent of men and 56.5 percent of women lost income \( \chi^2 = 8.55, \text{df} = 1, p < .005 \). In addition, 26.4 percent of the women and 12.2 percent of the men had other household members who lost income due to the floods \( \chi^2 = 4.85, \text{df} = 1, p < .05 \).

**Post-Disaster Stress**

Natural disasters do not lead to a major breakdown in mental health despite widespread media reports to the contrary, and most academic studies report that severe incapacitating emotional breakdown from disasters is rare (Baisden 1979). Nevertheless, while sweeping mental illness may not be the norm, hazard victims do experience considerable stress, increased anxiety levels, and depression that may be prolonged and quite disabling under certain circumstances.

There are a number of factors which have proven significant in predicting stress following a natural disaster. These include age (Cutrona et al. 1986; Ollenburger and Tobin 1995), previous experiences with natural disasters (Norris and Murrell 1988; Solomon et al. 1989), physical and mental health (Perry and Mushkatel 1984; Canino et al. 1990), and socio-economic status (Baisden 1979). Although gender has also been shown to be a significant factor in predicting stress levels with women exhibiting higher stress responses than men (Solomon et al. 1987; Tobin and Ollenburger 1994), it is the cumulative effect of family environment, care-taking roles, health, mobility, and age that more clearly defines the issues for women.

**Stress and Anxiety Responses to Flooding**

As would be anticipated, individuals responded to the flooding in their respective communities with various levels of stress manifested in forms of depression and anxiety. To assess the degree of stress, respondents were asked to indicate if they had experienced any of the following since the flood: trouble sleeping, hands trembling enough to bother them, loss of appetite, feeling weak all over, shortness of breath, and wondering if anything is worthwhile anymore. The responses were combined into a stress-anxiety variable. The data showed that, when individuals had simply been inconvenienced for only a short
time by the flood, their stress responses were minimal compared to individuals who had experienced extensive damage to their home and property.

Another measure of stress can be determined from the extent of medication taken for anxiety and depression. Only 1.8 percent of the men and 5 percent of the women took medication to help them sleep before the flood; yet, following the flood, 4.4 percent of the men and 12.4 percent of the women took such medication. Indeed, women were significantly more likely than men to require sleep medication after the flood \(\chi^2 = 4.97, df=1, p<.03\). Similarly, before the flood, 4.4 percent of the men and 5.8 percent of the women took medication to calm their nerves; after the flood, these percentages increased to 6.2 and 12.4 respectively.

**Symptoms of Post-Traumatic Stress Disorder**

Post-Traumatic Stress Disorder (PTSD) refers to psychological stress associated with major trauma. Its application to post disaster difficulties is fairly well documented (Madakasiru and O'Brien 1987; Wood and Cowan 1991). PTSD can be triggered by any event outside of normal human experiences which causes extreme psychological distress. Responses generally include intense fear, helplessness, unresponsiveness, and re-experiencing the event through dreams or nightmares. Individuals suffering from PTSD generally avoid stimuli that remind them of the event (American Psychiatric Association 1987).

Following the flooding, it was found that 71 percent of the high exposure cohort exhibited signs of post-traumatic stress disorder (Tobin and Ollenderger 1996). It should be stressed that women, particularly those who had families and those with less formal education, were more likely to show signs of PTSD than any other group. To extend this analysis, a logistic regression model was used to determine risk factors that might lead to PTSD following the flooding (Table 2). The model estimations were determined in four iterations and correctly explained 73.79 percent of the presence of PTSD among individuals in the high flood exposure area \(\chi^2 = 17.78, df=5, p=.0032\).

While individuals living in the high exposure area of Des Moines exhibited a high incidence of PTSD, minority females in poor or fair health were the group most likely to show PTSD symptoms. Females were 2.66 times as likely to experience PTSD compared with males. Minority respondents were 1.41 times as likely as non-minority members to indicate PTSD symptoms. In addition, individuals in good health were 5.34 times as likely as individuals in excellent health, and individuals with fair or poor health were 7.22 times as likely as individuals with excellent health to exhibit symptoms of PTSD.
Table 2.
Risk Factors for PTSD in High Exposure Area

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-1.31</td>
<td>.5762</td>
<td>5.1748</td>
<td>1</td>
<td>.0229</td>
<td>.2696</td>
</tr>
<tr>
<td>Sex</td>
<td>.98</td>
<td>.5066</td>
<td>3.7265</td>
<td>1</td>
<td>.0536</td>
<td>2.6590</td>
</tr>
<tr>
<td>Minority</td>
<td>.34</td>
<td>.6527</td>
<td>.2778</td>
<td>1</td>
<td>.5982</td>
<td>1.4106</td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
<td>11.5291</td>
<td>2</td>
<td>.0031</td>
<td></td>
</tr>
<tr>
<td>Health(1)</td>
<td>1.68</td>
<td>.6212</td>
<td>7.2800</td>
<td>1</td>
<td>.0070</td>
<td>5.3442</td>
</tr>
<tr>
<td>Health(2)</td>
<td>1.98</td>
<td>.6346</td>
<td>9.7014</td>
<td>1</td>
<td>.0018</td>
<td>7.2185</td>
</tr>
<tr>
<td>Constant</td>
<td>-.70</td>
<td>.7538</td>
<td>.8625</td>
<td>1</td>
<td>.3531</td>
<td></td>
</tr>
</tbody>
</table>

1 Codes for independent variables include: Age: 0=Younger than 65, 1=65 and Older; Sex: 0=Male, 1=Female; Minority: 0=Non-Minority, 1=Minority; Health: 0-0 Excellent, 0-1 Health(1)=Good; 1-1 Health(2) Fair Or Poor.

Interestingly, younger individuals were more likely to exhibit PTSD than individuals 65 years of age or older. This pattern is consistent with some earlier disaster research which identified older individuals as more "seasoned" with the flood experience. Also younger individuals often had more family concerns such as the care of young children which increased their anxiety related to the flood consequences (Tobin and Olenburger 1994).

In order to test whether or not the flooding was the key factor in creating the incidence of PTSD among this population, a similar analysis was conducted on the control group. This group included individuals who had varying degrees of exposure to the floods. The level of exposure was coded into three categories: no exposure; minimal exposure including loss of services but no damage to home, property, or person; and high exposure including damage or loss to property, home, job, and/or personal injury.

Table 3 describes the logistic regression model with the inclusion of the exposure variable predicting PTSD among the control group. All of the independent predictors are defined the same as in the first model. This time the model was able to predict 80.40 percent correctly ($\chi^2 = 571.08$, df=7, p=.0000), clearly demonstrating that level of exposure is the most significant predictor for PTSD. Individuals with a high level of exposure were 562 times as likely to exhibit PTSD as compared with those with no exposure. Even individuals with minimal exposure were 357 times as likely to exhibit symptoms of PTSD when compared with those individuals who lived in the community but were not directly affected by the floods.

In this study, there were two significant predictors that decreased the severity of PTSD: maintenance of employment and the perception of positive outcomes from the flood experience. The presence of insurance to help cover...
tion, divorced women are more likely to be heading households with two or more individuals, and women are primarily responsible for child-care following a divorce.

In addition, more attention should be given to the interaction of gender with other factors including income, health, and race. For instance, this research confirmed that minority women in poor or only fair health were more susceptible to stress than most other groups. It would seem pertinent, therefore, to address those structural constraints that might exacerbate problems for such individuals. In this regard, for example, the availability and distribution of relief aid following disasters may play significant roles.

Therefore, the concerns of women during disasters are multifaceted, potentially encompassing concern for children and family, employment, financial constraints, and possibly care-taking for elder relatives. Given this complex framework, it is not surprising that women generally experience higher levels of stress following natural disasters.

References


An Exploratory Study of Woman Battering in the Grand Forks Flood Disaster:
Implications for Community Responses and Policies*

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This paper presents an exploratory study of woman battering in the Grand Forks, North Dakota flood of April 1997. Based on my qualitative research of women's experiences in this flood, I present two case studies of battered women to enhance understanding of what intimate partner violence means to women in the face of a natural disaster. The case studies illustrate how battered women make sense of their situations and how factors such as class and disability play a role in how women experience domestic violence. The case studies also show why services for battered women, such as emergency shelters and crisis counseling, are crucial during a disaster period. Even though we do not know if domestic violence rates increase in a disaster, we do have evidence that the demand for domestic violence services increases during disaster times. In light of this, I argue that there is a need to prepare for that situation.

Two facts are generally uncontested regarding the abuse women receive from their intimate male partners. First, the home is not always a safe place (e.g., Dobash and Dobash 1979; Walker 1979; Gelles 1997). Second, because woman battering frequently occurs in the context of the home and is stigmatized, it is a largely invisible offense (e.g., Belknap 1996). However, the

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phenomenon of woman battering is so widespread that it is considered by some scholars as the most frequent form of family violence (Levinson 1981). Indeed, it has long been recognized that calls for woman battering are among the most common police calls (Goldstein 1977). Research on woman battering was almost non-existent until the second wave of the feminist movement in the 1970s.

To date, however, research on woman battering in post-disaster communities is still almost non-existent. In the disaster research community, many question whether rates of woman battering increase in a disaster. Thus, although this question has been frequently asked, it remains largely unanswered. There is no simple or straightforward way to determine the rates, and there have been no systematic studies or controlled population surveys that support a direct causal relationship of the disaster events on woman battering rates. However, there are some studies and reports on domestic violence in disasters that deserve attention. In this paper, I summarize the sparse existing research on woman battering in the context of disasters, and then present findings on woman battering in my research on disasters using the Grand Forks' flood of 1997.

**Literature Review**

To date, only two studies focus on the issue of woman battering in the context of disasters. First, Wilson, Phillips, and Neal (1998) studied community organizations' perceptions and responses to domestic violence in Santa Cruz after the Loma Prieta earthquake; in Lancaster, Texas, after a tornado; and in Dade County, Florida, following Hurricane Andrew. Second, Enarson (1998) surveyed 77 domestic violence organizations in the United States and Canada, 41 of which had some disaster experience, to learn about their disaster planning and experience. Other disaster studies have mentioned the issue of woman battering in tangential, less focused ways. Finally, other woman battering research, not addressing disasters, also poses relevant issues to the phenomenon of woman battering in disaster sites. In this section I summarize these studies: those focusing directly on woman battering in disasters; those disaster studies where woman battering is not a central theme; and those woman battering studies which are not about disasters, but pose important points relevant to woman battering in disaster sites.

**Attempts to Measure the Impact of Disasters on Battering Rates**

Some research has examined the issue of whether woman battering increases in a disaster. Wilson and her colleagues (1998) found that Santa Cruz reported large increases in domestic violence, the city of Lancaster, Texas, reported no noticeable increase, and in Miami-Dade County the data were
mixed, although they suggested an increase. Enarson (1988) found that those domestic violence programs that experienced a disaster indicated declining service demand during the impact period, as women could not get to the services, but an increased demand after that, which was complicated by a decrease in organizational resources. For many domestic violence programs the demand for services was mostly from existing clients, not from women seeking help for the first time. Morrow and Enarson (1996), in their research on women in Hurricane Andrew, did not focus specifically on the topic of domestic violence but reported that social service providers felt strongly that family violence had increased. Morrow (1997) reported that there was initially a drop in domestic violence injunctions after Hurricane Andrew, perhaps due to the inaccessibility of government services, but then the number of injunctions increased substantially. Based on their experiences in disasters in Australia, several social service providers reported that increases in domestic violence rates are “repeatedly found” during disasters and their aftermaths (Honeycombe 1993, p. 29; Dobson 1993). Contrarily, there is evidence that crime rates in general drop after a disaster and that prosocial rather than antisocial behavior characterizes disaster periods (Quarantelli 1994); therefore, some may feel that woman battering rates would decrease.

While evidence is limited, the common perception is that battering rates increase since the demand for services increases. It is difficult to know if the battered women seeking assistance are mostly existing clients, meaning they sought help for their battering situations prior to the disaster, or new clients, implying that the disaster brought on physical violence in relationships that were not abusive before the event. If indeed all the clients are existing ones, then technically the number of battered women does not increase, and the increased demand is indicative of the clients all needing help at the same time. Another scenario may be that many women were in domestic violence relationships prior to the disaster but had never gone for assistance, so they count as new clients but are actually not new victims.

Community Responses to and Preparedness for Woman Battering in Post-Disaster Sites

A few previous studies have addressed community responses and the preparedness of organizations to woman battering. In non-disaster times, battered women are often overlooked as victims by the public at large, the criminal processing system (e.g., the police and court professionals), and service and health agencies and professionals (e.g., physicians, social workers) (e.g., Dobash and Dobash 1979; Belknap 1995; Gelles 1997). It is, therefore, possible that they are overlooked after disasters as well. Wilson et al. (1998) report that the community, domestic violence, and disaster organizations in their
study that were aware of the existence and extent of domestic violence prior to the disaster were more sensitive to the presence of post-disaster violence. Therefore, if a community defines domestic violence as a problem pre-disaster, it will be more able to identify and respond to it following the event. Wilson et al. (1998) argue, then, that a community’s ignorance of a domestic violence problem could increase women’s vulnerability and possibly contribute to more injuries and deaths after a disaster. Enarson (1988) found that most grassroots women’s organizations are not prepared for a disaster, and few domestic violence programs participate in local or regional planning groups. These women’s organizations, however, are interested in increasing their disaster readiness. Honeycombe (1993) advocates that disaster workers are trained and become informed on issues of woman battering in order to be prepared for increases in this violence. Thus, there are both domestic violence organizations ill-prepared for a disaster, and disaster organizations and communities poorly prepared for domestic violence situations in disasters.

The Antecedents of Disasters Purported to be Related to Subsequent Woman Battering

A significant amount of public opinion, professional responses, and research agendas have attempted to understand the causes of battering. While there is a strong history of blaming the victims for the battering perpetrated against them (see, for example, Dobash and Dobash 1979; Tong 1984), more recent research has attempted to understand what places men (and women) at risk of becoming batterers or escalating their existing battering practices. Some disaster research has found that men use more alcohol after a disaster (Green 1993), which some believe would increase domestic violence rates (Pleck 1987). Yet Kantor and Straus (1987) examined the role of alcohol as a cause of woman battering and concluded that excessive drinking is associated with higher woman battering rates but that alcohol use is not an immediate antecedent of battering. Dutton (1988) identified the excuses and justifications batterers frequently use to deny wrongness and responsibility for their battering behavior. Dutton found that batterers use situational characteristics, such as being drunk or fired from a job, to excuse their behavior, and characteristics about the victims, such as not being dinner ready or allegedly having an affair, to justify their abuse. Thus, a disaster crisis could be used in this manner, to excuse their behavior and to blame the flood for losing control. For example, Enarson (1998) interviewed one woman whose husband beat her so badly that she had to be hospitalized. She said he had lost control because he could not handle the effects of the flood, which included losing household belongings, not having enough food to eat, and losing his job because his business was destroyed in the flood. Experts in the field maintain that perpetrators
are very much in control, stating that crisis conditions do not cause the abuse nor do they cause men to lose control. Gelles (1997) notes that stressful social factors such as poverty and illness may be related to violence and abuse, but the abuse would not occur if there was not widespread social and cultural approval of violence in the home.

**Differential Vulnerability and Battering Experiences**

Some women may be more at risk to woman battering than others. In addition, of those women who are battered, their social status and resources affect their subsequent vulnerability. For example, women with disabilities may be more vulnerable to battering. Women with disabilities are much more likely than women generally to be victims of physical and sexual assault, and almost all the perpetrators are men who are known to the women (Sobsey 1994). These women face a high incidence of violence and abuse in their lives in general as they are seen as being of little worth, invisible, and less than human (Chenoweth 1996). Compounding this, the violence disabled women experience is largely unknown and invisible since they often experience societal marginalization, powerlessness, and exclusion (Chenoweth 1996). In disasters, therefore, disabled women may be at increased risk to woman battering.

Poor women are also more at risk. In disasters in general, research has found that poor women’s concerns are not taken seriously, and they lack the resources and support necessary for recovery and reconstruction (Morrow and Enarson 1996). Poor women may also be more vulnerable to woman battering. Schwartz (1988) argues that the “universal risk” theories are so popular, primarily in an effort to see women as a unified group under patriarchy and to repudiate past class biases in research, that researchers have overlooked how working-class and middle-class women have distinct experiences with battering. In fact, empirical studies have shown that there is more woman battering in low-income, low socio-economic status families (Okun 1986). Schwartz (1988) argues that if you examine the effects of both patriarchy and capitalism, it is clear that there is not a universal risk to all women but that socio-economic status is related to chances of victimization and consequent treatment and resources. Thus, some women are more vulnerable than others.

**How the Quality of Intimate Relationships are Impacted by Disasters**

Disaster studies have found that disaster events can affect gender roles and relationships between men and women. Keeneridge and Fordham (1998) found that women, many of whom had gained a new self-confidence during a flood disaster, separated from unsupportive partners. This is relevant in that many women in battering relationships lack the confidence to leave their
abusers (Gelles 1997). Alway et al. (1998) found that men’s role as protector and provider is threatened in a disaster, a pertinent finding in that domestic violence concerns issues of male dominance and control. Davis (1998) found married couples who reported strong relationships prior to a disaster reported their relationships were stronger after the disaster. In contrast, couples who reported weak relationships prior to the disaster generally reported that their relationships were even weaker after the disaster. Interestingly, however, Davis found the stronger couples experienced more tension and strain during the disaster, while the weaker couples reported feeling closer during the acute period of the disaster. While her results do not address domestic violence specifically, they do touch on some relevant issues concerning conflict between intimate partners.

The five issues covered in this literature review — measuring battering rates, community and organizational responses to woman battering, the antecedents to battering, differential vulnerability, and changes in intimate relationships in disasters — are all areas in need of research in disasters and will all be addressed in this study.

**Setting and Methods**

This exploratory study is part of a larger feminist ethnography of women’s experiences in a disaster. As a feminist ethnography, this research involved multimethods, including interviewing, observation, participation, and archival analysis, all employed in an effort to make women’s lives visible and their voices audible (Reinharz 1992). As a feminist ethnographer, I used fieldwork to get closer to women’s realities, and, in alignment with feminist research in general, I work towards three goals in this research: “(1) to document the lives and activities of women, (2) to understand the experience of women from their own point of view, and (3) to conceptualize women’s behavior as an expression of social contexts” (Reinharz 1992:51).

My setting was Grand Forks, North Dakota, and East Grand Forks, Minnesota, two adjoining towns on the Red River that experienced a flood of historical proportions in the spring of 1997, after a winter of severe blizzards. The disaster, which resulted in the mandatory evacuation of all residents of both cities, approximately 60,000 people, cost hundreds of residents their homes and the entirety of their belongings. In addition to their homelessness and loss of material possessions, the flood victims experienced unemployment, a lack of childcare services, the dismantling of routine and stability, the separation of family members, the loss of schools and neighborhoods, and uncertainty about the future. Clearly, this disaster was physically and emotionally exhausting for the residents and was a highly stressful crisis.
For this study, I conducted sixty in-depth interviews with forty women of various ages, social classes, professions, and marital statuses, to learn about their experiences in the flood. Twenty of the forty women were formally interviewed twice, and several were informally interviewed three or four times. The first interviews took place relatively soon after the event, in the summer months of 1997, and the second follow-up interviews generally took place a year later. In addition to the interviews, I conducted extensive observations. I spent as much time as possible with women, both women I had interviewed as well as other women in Grand Forks, observing, and participating in, their lives. With these women, I attended community events, family potlucks, religious services, neighborhood barbecues, and other informal outings and settings. Finally, I analyzed newspaper articles and interviewed representatives of the Grand Forks domestic violence prevention center and gathered relevant materials and statistics from the organization.

For this article, I present an analysis of interviews with two women from the sample who reported domestic violence. These two cases do not necessarily represent all women who experience domestic violence in disasters, although case studies in general are often able to provide insights into general understandings of a social problem (Stake 1994). In addition, case studies are considered useful and valid for investigating a phenomenon in its real-life context (Yin 1984). I believe a case study is appropriate for shedding light on this almost unknown phenomenon: battered women’s experiences in the context of a disaster. The findings I report revolve around the context of woman battering in the lives of women in disasters, exploring the realities of two women’s lives to highlight the kinds of problems some women will face in a disaster. Thus, I intend for these two in-depth accounts to provide insight into what these experiences can mean, how they unfold, and how battered women can be assisted in disasters.

The current study focuses on two women, Karen and Liz. While these two women were the only women who spoke to me about their experiences with woman battering, there may have been other women in my study who also experienced this violence. Due to the stigma and invisibility, along with what is known on woman battering rates, it is likely that other women in my study were also battered but did not report it to me or anybody else. Indeed, Karen did not reveal her situation to me until our third face-to-face interview, after we had known each other for over a year and exchanged phone calls and letters, which illustrates the need for us to establish trust before she could confide in me. One limitation with these case studies is that both women are white so there are no racial implications, but the women do represent the racial demographics of Grand Forks, and the two women varied substantially in their class status. It is necessary in future research to keep in mind that the experiences
of battered women of color are likely confounded by race (e.g., Miller 1989; Abraham 1996; Belknap 1996).

I will begin by presenting the information I gathered from the Grand Forks woman battering organization in order to give a larger context to the woman battering situation in Grand Forks, and then I will allow you to hear Liz’s and Karen’s words directly, thereby letting their voices contribute to the conversation on domestic violence in disasters. As social scientists know, police records, official statistics, and even survey research results do not often match the stories told by women who have been victims of physical violence, and thus it is critical that we let women speak for themselves (Erez and Belknap 1998). It was through such traditional grassroots efforts, from listening to women, that wife abuse was first discovered in the early 1970s (Gelles 1997). It makes sense, therefore, that listening to women now will help us to discover how intimate violence plays out in a disaster.

Findings

Increase in Demand, Decrease in Services

The Community Violence Intervention Center, the organization for battered women in Grand Forks, provided me with information that helps illustrate how the demand for services increases at the same time that their resources are lower than normal. The center provides many battered women’s services, such as crisis counseling, legal referrals, and assistance with obtaining protection orders. It does not run a shelter, so battered women must use the homeless shelter in town if they cannot find other housing. The number of protection orders, which are issued to protect women from their perpetrators, are a good illustration of the demand for services. The center found that prior to the flood, during the period of January to March 1997, there were twenty protection orders issued. However, after the flood, during the same period of 1998, January to March, there were thirty-three protection orders that needed to be filed to protect women in domestic violence situations, which indicates a substantial increase.

In terms of the amount of available resources during this same time period, we can analyze the number of volunteer hours, which is the total amount of time given to the center by local residents who volunteer their time. In the first time period, January to March 1997, volunteers gave 3,475 hours to the center, while in the second time period, January to March 1998, they were only able to give 1,903 hours of their time. These statistics allow us to see a period before the flood in 1997, and the same period after the flood, in 1998. An increase in the number of protection orders may be explained
several ways. The increase may indicate an increase in violence, or a greater propensity to report the violence, or a woman's greater inability to handle the violence on her own. No matter which, the increase in protection orders clearly represents an increase in workload for the center employees. In addition, we see that volunteer hours are down, even six months after the event, as volunteers are still working on repairing their own homes and lives. By having fewer volunteers to help in the office, the staff finds itself with even more work.

The staff had additional work for several other reasons. The homeless shelter, which serves battered women, was lost in the flood, so staff had to find housing for battered women at local motels. This was a difficult task, considering that most residents of the city were also in need of housing at that time. The staff reported that overall there was a huge demand for services from a combination of existing and new clients. They also told me that some women, not having any resources, called their batterers for assistance during the disaster — and as a result found themselves back in an abusive relationship after the flood. The staff also reported that the local jail let some batterers go during the evacuation period, which frightened and angered the battered women and the center staff. This occurrence is important as it illustrates the community’s role in enabling the violence. For all of these aforementioned reasons, it is clear that, while the demand for services increased, the personnel and financial resources decreased substantially.

**Entering into Domestic Violence**

Karen is a 42-year-old slender white woman who has lived in Grand Forks her entire life. She is a college-educated social worker who has been married for 20 years and has two children, aged 6 and 13. She and her family lived in a modest, well-kept two story wood house on a quiet tree-lined street of single-family homes. The family members, who evacuated in the flood, were not hurt physically. When they returned to their home several weeks later, however, they found that their basement level, which had been their family room and the hub of family activity, was lost in the flood waters. In addition, Karen’s elderly in-laws lost their home, which was several blocks from Karen’s, and all of their belongings.

Things were very tense around the house, Karen explained to me. Greg, Karen’s husband, became more and more angry — at the flood, at the city, at the Corps of Engineers, at his family, and, most of all, at his wife. Karen assumed that his anger would subside as time passed and the town and their home were rebuilt. Instead, Greg’s anger grew with each month following the flood. Indeed, a year after the flood his anger erupted into violence, and he began beating Karen. She explains how the situation began:
Over the last year, almost every day, it's been sort of a slow onset of sort of a paranoia about, first of all, other men, of which there are none. And then he started getting more aggressive about it, going through my work papers, it got so bad that I couldn't go anywhere. He's never had a very good temper, but it's gotten really bad. Pretty much isolates me from my family. The first year after we were married there was an incident, but nothing until now.

While he had always had a bad temper and was always highly critical of her, Greg had not been physically abusive to Karen in twenty years, and she had not contemplated leaving until the physical violence began after the flood. She explains how she decided to leave:

The crystallizing incident took place on Mother's Day, May 9th. That's when Greg was pushing me and Jonathan walked in and lunged to defend me. He had a clenched fist, ready to hit his dad. He looked like he wanted to hit him. . . . My son had had enough of his yelling. He yelled at him daily. I think Jonathan felt like that's my mom and I'm going to protect her.

I realized I had to go.

Karen's 13 year old son Jonathan wanted to protect his mother, and he also expressed to Karen that he wanted them to get away from his father. Many children in domestic violence situations become very protective of their mothers, and their willingness to leave a violent father helps the woman decide to leave (Debash and Dobash 1979; Ferraro and Johnson 1983).

In Karen's description of what was happening in her home, we learn that the flood may have been the main, or at least a large, contributing factor for the onset of the violence. She describes how the flood affected her husband:

He likes things ordered and when things are out of order he doesn't like it. So the flood was a nightmare for him. It's not like his temperament completely changed with the flood, but I definitely do consider us to be a flood casualty. The flood did bring on his anger.

But Karen continues her story:

He was kind of already on that path. He's always had a short fuse. He was getting worse with age instead of better, I can't explain that. His anger was always thinly veiled, and he was always highly critical, picking on me all the time.

After the violent attacks after the flood, Karen decided to leave, and she moved out and got a restraining order. She explains how it feels to have left the situation:

I got a protection order that he violated three times. Now he's being charged by the state with stalking. He can't do too many
more things before he ends up in jail. I haven’t regretted my decision to leave for a minute. It’s so much better now. Nobody wants to do this, but in the long run it’s better for everybody. I feel like a huge weight has been lifted.

Karen perceives that Greg was already heading towards committing more violence, and that if it was not due to the flood, it may have easily been triggered by something else. However, it is important to note that he was physically violent once in their marriage nineteen years earlier and then again right after the flood, but not at all in between. Several months after she left Greg, she thinks back on her experience:

You know, when I used to think about women who were victims of abuse, that if you were privileged to some extent, then your experience would be vastly different. And now I think not. I think not. Because no amount of privilege can stop that person. You know? I am no better off than an uneducated, poor, Native American, ethnic woman. I am no better off really in that respect. Apparently, when a man in our society gets in that mindset, there is so much latitude for them to act out, to do damage, that a reasonable person can’t imagine would be allowed to continue. You can be smart, articulate, educated, competent, but it doesn’t matter, it doesn’t help.

Karen came to the difficult realization that being somewhat affluent and educated did not protect her from her husband’s violence, no matter her race or economic background. She was acknowledging her own vulnerability, the vulnerability of all women in our society, and the power differences between men and women. Karen noted that she was also vulnerable financially:

Somewhere in the last year he started putting money somewhere. I think he was hiding it. I’ve never been somebody that worries that much about money. The truth is that my name is not on any of our assets. I don’t know how that happened. It’s just not something that I attended to.

Yet despite her financial concerns, Karen did have resources available to her such as middle-class family members who were willing and able to take her in and support her. In addition, with her educational background and occupational status, she knew that her job was secure. These factors may have helped Karen to leave immediately after the beatings, something many battered women are not able to do. Thus, while Karen’s status did not protect her from becoming a battered woman, it did help her successfully deal with the situation once she was in it.

Karen felt that the flood brought on the violence, but that in a way that was good, in that she could deal with it sooner rather than later. In a recent
conversation with Karen, she expressed regret that she did not leave Greg earlier, in that he had been mean to her and the children for years. She believed that if the flood had not brought on the violent incident, there would have been a more violent, and more dangerous incident down the road. She explained:

I think when you’re living in it you make all kinds of excuses, you try to find a way to frame it that is not quite as damaging. You have to rationalize it or you can’t stay. There you are one day, with your kid thinking they have to beat their dad to protect you. I really think someone in my family would’ve gotten hurt. Maybe me, maybe one of my kids. I would rather have it be me. And considering that, it’s better sooner than later... I think I stayed too long. I should have known better. But, now, I’m really excited about what I’m doing now, and my kids are safe.

Today Karen is living in a small apartment with her two children, working and going to school at night for an advanced degree. She lives in fear as Greg continues to stalk her, drive by her apartment late at night, follow her in his car, and on one occasion broke her door and entered her apartment. It is difficult, if not impossible, to know if his violence would have occurred if the flood had not happened. Karen believes it probably would have happened, but maybe further down the road. The important thing to consider is that Karen needed assistance — a protection order, counseling, housing — in the midst of the disaster crisis. Without this assistance she may not have been able to leave or keep herself and her children safe.

Leaving Domestic Violence

Liz, like Karen, is also a Grand Forks native, white, and in her early forties, but she is less privileged than Karen in many ways. Liz has lived in poverty all her life and is disabled from a car accident, leaving her unable to walk without assistance and unable to work. She grew up in an abusive household and has been in abusive relationships since she was a teenager. Her partner of the last nine years, and husband of the last two, Fred, has beaten her many times, landing her in the hospital with serious injuries on several occasions. Liz described a particularly bad beating two weeks before their wedding that left her hospitalized:

I came home from shopping and he was intoxicated. I didn’t start screaming, I didn’t start yelling. I asked him to leave. The police had told me not to confront him. He began throwing things, screaming at me, threatening to kill me. Then he lunged at me and he grabbed me by the collar of my shirt and started shaking me. I remember screaming at him "You’re killing me!" Then I lost consciousness. When I came to I was on the recliner,
and he was hitting me on the head with his fist and screaming at me. At this point I was going in and out of consciousness...

The police took me to the hospital and people were staring at me. My neck was so swollen, my face was so swollen, I think I was in shock. He nearly severed my spinal cord. The doctors said he must have broken me one more time, he would have severed my spinal cord and I would have been dead. They called the counseling center, and the advocate came, the poor girl, and I was her first call ever. I felt so bad for her.

Liz explained why, after this serious assault, she decided to marry Fred:

The invitations were out, and he said it would never happen again. This is someone you love, you want to believe it is the last time. But, I mean, I just can’t tell you why I went ahead with the wedding. I mean I really can’t answer that question, because I don’t know why I did. But I did.

After going through with the wedding, Liz suffered extensive physical abuse:

The police have been to our house so many times, it isn’t even funny. I mean he is a man that has nearly killed me I don’t know how many times... But I have always been minimizing the physical abuse. I repressed a lot of the memories of the beatings. Until the flood, then all the memories came back.

Despite the beatings, Karen was emotionally attached to Fred and did not have the confidence or independence to leave him. She explained that she felt “afraid” when she was not in a relationship.

Just prior to the flood, Fred entered a resident drug and alcohol treatment program. Liz, therefore, was on her own during the flood and had to deal with a difficult evacuation period and the loss of her home by herself. Her basement apartment was flooded with ten feet of water and raw sewage. In photos she showed me of the damage, the walls, furniture, and carpet appeared to be painted black but were actually covered with sludge from the flood waters. The apartment, which tested positive for a variety of bacteria, had to be gutted, and all the contents had to be thrown away. She described her feelings about the loss:

The night I got into town, the third of May, was when I found out that I had lost everything. I mean, I was about as vulnerable as I could be. It’s been terrifying, especially when I’ve been hungry and there is no money. And I didn’t have the money to replace anything.

Liz had to face the destruction of the flood in addition to the continuing crisis of poverty. She believed surviving the flood without Fred was the reason she discovered she was strong and competent enough to survive without him. She discussed her new-found strength:
But I’ve been really lucky with the flood. I’ve learned so many good things through this. I have really worked on myself and reevaluated things. I’ve taken the flood as an opportunity to grow personally. I have found an inner strength that will carry me through anything. How else could I have made it through this? I now know that I can count on myself. I can trust myself. It’s been painful and I’ve been lonely. . . . I still love him with all my heart, and there are many things about him that are very wonderful, but there’s his dark side and that dark side will cost me my life. I’m just not willing to pay that price anymore.

The experience empowered Liz and gave her a sense that she can make it on her own, something she never believed before. Liz was not only dealing with domestic violence and poverty but also a physical disability. In my conversations with Liz, she discussed how her disability affected her flood experience, describing her evacuation with her 21-year-old daughter, her son-in-law, and her two young grandchildren:

When my daughter and I evacuated we went to the air base. But they wouldn’t take me because they said all of their accommodations for people with disabilities were full. So they turned us away. They told me to get in my car and keep going. . . . So we drove on to Devil’s Lake, and the shelter there said the same thing. No accommodations for me. We couldn’t believe it. And I have no proof if they were actually full or not or if they didn’t want to deal with extra needs. We go on to Rugby, same thing, we got turned away. It was about one thirty in the morning and we pulled into Minot. . . . They told us that they weren’t giving any assistance to Grand Forks flood victims and we should get back in our cars. . . . I said “Where am I supposed to go?” . . . And I’m standing there in my pajamas.

Liz eventually found a place to stay until her apartment was rebuilt, but her disability still posed additional considerations. She explained how her disability affected her ability to leave the town where her abuser lives:

I’ve had to get over my stubborn will, and realize that I have a chronic illness that is progressive. I live with intense physical pain, and intense physical symptoms, that I can’t control. I don’t have a choice there, but I have to learn to listen to my body. And when it says stop, I have to stop. That’s one of the reasons I can’t leave here, even though he’s [Fred] here. My doctor’s here, and I can’t start all over finding doctors. And I need to be near my daughter because she knows how to take care of me.

As Chenoweth (1996) found in her work, women with disabilities need to
combat their isolation and exclusion to prevent being victims of male violence. Liz continued her story, and acknowledged that the Grand Forks Violence Intervention Center, and Amelia, a staff member there, helped her tremendously:

When he got back to town, I'd call Amelia all the time. Boy, did I need them then. If I couldn't make it in, we'd do the counseling over the phone. I used this time for personal growth. It wasn't easy. Had the Center not been there, or my daughter, you know, I wouldn't have made it. There were times in the middle of the night when I've needed the Center and called. I can't give up my counseling when I'm in the same town as my husband.

In addition to noting the importance of the center, Liz was also admitting that the flood, and the struggles involved in recovering from it, may have had positive consequences. In my research, many of my participants expressed positive consequences of the disaster, such as new skills acquired, and personal strength and confidence discovered. Liz revealed how her personal growth and inner strength carried her through the disaster and how, with the help of the battered women's organization, she was able to leave a life of violence. She described how she felt to be free from battering, over a year after the disaster:

For the first time in my life I feel free. I can go where I want, I can do what I want. I don't have to look over my shoulder anymore. I don't come home, turn the key in the lock, and get beaten. Now I can do whatever I want. No one is going to tell me you can't do that. And no one is telling me I'm ugly and no one is telling me that the world is falling apart 'cause of something I did.

The flood disaster may actually have been the catalyst Liz needed to leave the abusive relationship and gain a better awareness of herself. Ferraro and Johnson (1983) found that catalyst events have been found to be important for helping women leave batterers. Yet while Liz was free of the violence, she was still faced with extreme poverty after the flood. Liz described her situation:

I'm applying for disability and boy I hope I get it. I have no income. I can't eat three times a day. I just go hungry. Luckily I do get a housing voucher because of the domestic violence. I lost all my clothes, my furniture, everything. I mean, I have no money, no money. I have three dollars and 96 cents in my checking account.

A year after the flood Liz was back in her basement apartment, living on her own, and had just started to receive disability payments. She was still seeking counseling to help her hold on to her new strength and keep Fred from
reentering her life. Looking at her experience with the domestic violence and the disaster, Liz had an image of what had happened:

I’m starting a new life. So I’m going to take that flood, and all that abuse, and when the flood waters left Grand Forks, well, that was my old life leaving. All the abuse left with the water.

That’s how I look at it.

Research has found that battered women often have low self-esteem and a very poor self-image, which contributes to their feelings of dependence and powerlessness (Gelles 1997). Therefore, if a disaster provides an opportunity for a shift in one’s view of oneself, and an increase in self-confidence, then this could help women leave domestic violence. As Liz explained to me, the disaster put things in perspective; it forced her to determine what is important in life. Enarson and Morrow (1997) found in their work on Hurricane Andrew that a woman planned to use disaster assistance money to buy a bus ticket out of town and out of an abusive relationship. Thus, disasters can provide, both financially and psychologically, an opportunity to leave an abusive relationship.

Discussion and Conclusion

Woman battering situations are diverse and complex. Knowing and examining the full social and individual context of a battered woman’s life is considered essential to understanding her domestic violence circumstances and choices (Dutton 1996). In this exploratory study, I emphasize the context of woman battering in disasters, using two case studies to shed light on the realities of two women’s lives, thereby showing not the frequency but the range and variation of some of the kinds of problems women will face in a disaster. Based on the existing data on woman battering in disasters, and from my own study and the work of other disaster researchers, I have several recommendations concerning future directions for theory, methodology, and policy.

Disaster contexts are an important theoretical site for studying women’s lives and for understanding their experiences from their point of view standpoint, and for conceptualizing their behavior and experiences within a full social context. This research contributes, for example, to feminist theories that address the intersections of race, class, and gender in women’s lives (e.g., Collins 1993) and how these statuses contribute to their vulnerability or marginalization. In this study, I am able to address social class and disability issues, and some of the data challenges the “universal risk” theories of woman battering by showing that some women’s status does affect their vulnerability. For example, one of the case studies helps to shed light on the battering experiences of disabled women. This is an important addition to the literature since the experiences of violence for women with disabilities are not often heard
(Chenoweth 1996) and the intersection of gender and disability in general is not well explored in research (Thomson 1994). Also a challenge to universal risk theories, the case studies presented here help illustrate how lower-class and middle-class women may have different experiences as victims of domestic violence. For future research on woman battering in disasters, I would recommend that in addition to disability and class, the role of race and ethnicity be examined in order to contribute to the feminist theoretical knowledge on what exactly the intersections in women’s lives mean for them and how they contribute to their marginalization.

In addition, as social scientists we can contribute to general domestic violence theories by studying the disaster context. Domestic violence is acknowledged as a social problem, but the experience of being battered is not well understood (Ferraro and Johnson 1983). Examining intimate violence within the context of a natural disaster could provide insight into domestic violence behaviors in general. For example, we can begin to understand how batterers use the disaster as an excuse and justification for the violence. Past research has found that some battered women also blame an external force, such as drug addiction or pressures at work, for the situation (Ferraro and Johnson 1983). In that way, the violence is seen as a temporary situation that could be overcome, and the women can deny that the abusers want to hurt them. Thus, battered women may frame disasters as an “external force” rationalization, as Karen did to some extent in her interview. As disasters are important research sites, I believe domestic violence theories could be advanced by further research in the disaster context.

I have several thoughts on methodological directions for future research. I advocate the broadening of research questions to go beyond asking if woman battering rates increase. I also suggest that we utilize more ethnographic, longitudinal methods to more fully understand woman battering in disasters. For example, an in-depth, longitudinal study would help us to determine at what period in the disaster aftermath battering is most severe. This study and the limited existing research on woman battering in the context of disasters indicate the increased demand for services may occur even months after the disaster. For example, in Enarson’s (1998) survey of domestic violence organizations, many reported increases six months to a year later. Yet I learned that the Community Violence Intervention Center in Grand Forks, which had their hotline number forwarded to a cell phone so that evacuated staff scattered across Minnesota and North Dakota could continue to receive calls, received many calls for help in the acute period of the crisis. Future research may try to understand at what point in the disaster process there is a need for services, so communities can prepare to help women at that time and so that researchers can get a better understanding of the disaster process.
Lastly, I recommend that we use the data presented here to help direct future policy regarding woman battering in disasters. Karen and Liz provide important illustrations of why we need to focus on the fact that there is an increase in the demand for domestic violence services after a disaster. If we were to assume that their stories were typical of many other women, we might say that Karen and Liz cancel each other out — one woman left a domestic violence situation, one woman is in a new domestic violence situation — and thus we could see how domestic violence rates remain stable. If we only look at statistics, however, we might miss the larger issue: both women desperately needed domestic violence services.

In light of the demand for services, social service providers need to be prepared and be given assistance from the larger community. Enarson’s (1998) study found that while the demand for services increased, the financial help, from private funds and government, was very short-lived. In addition, fundraising is very difficult after a disaster. She also reports that the domestic violence organizations have staff overload, as the women on staff have also experienced a disaster, and many of them have to work on their own homes and help their own families recover. Grand Forks is experiencing both staff overload and a shortage of funds. Now the Grand Forks Center is working to open a shelter solely for battered women, as the shelter for homeless women was never safe since the homeless shelter needed to publicize its location. The center hopes to collect enough private donations to buy a building and open a shelter within two years. Thus, we need shelters and women’s organizations to be adequately funded and supported.

In addition, I suggest that women’s service providers be better included in community disaster planning. The woman battering organizations need to be better prepared for disasters, and the emergency management organizations need to be more aware and sensitive to woman battering issues. As Wilson et al. (1998) state, communities need to be aware of the domestic violence issue prior to the disaster event in order to be effective after a disaster. This points to the need for domestic organizations to be represented in disaster planning and to be included as an important component of the disaster recovery community. Finally, I propose that we view disasters as a window of opportunity for the community to address woman battering. Disasters are often a time of change and possibility, thus allowing the community the opportune time to acknowledge and assist women in woman battering situations. I argue that communities should take disasters as an opportunity to make long-lasting changes to their policies and structures so that woman battering organizations and shelters receive sufficient support and that women receive the help they need in both disaster and non-disaster times.
Notes

1. In this paper, Grand Forks refers to both Grand Forks, North Dakota, and its neighboring town across the river, East Grand Forks, Minnesota.
2. Her results are in alignment with many in the disaster research community who believe that disasters speed up or exaggerate, but do not drastically alter, social processes, structures, and relationships.
3. All names have been changed to protect identities.
4. Although this is similar to Walker’s (1979) contention that some battered women actually behave in ways to precipitate what they view as an inevitable beating by their batterers, Karen’s case is different in that she did not do anything to precipitate the violence. However, she reported feeling relieved that the disaster event had done so.

References

Ferraro, Kathleen J. and John M. Johnson. 1983. “How Women Experience Battering...


