Risk and Resilience Among Children Homeless in Minneapolis

by Ann S. Masten and Arturo Sesma, Jr.

Homelessness among children in Minnesota has increased dramatically over the past decade, as it has among children nationwide. Both the number of children in shelters in Minnesota and the proportion of individuals in shelters who are children have increased (see Figures 1 and 2). Moreover, these increases have occurred among different family types. Between 1991 and 1997, there was a 440 percent increase in the number of single men with children in shelters, a 240 percent increase for single women with children, a 310 percent increase for couples with children and a 570 percent increase in unaccompanied youth.*

As homelessness increased among children in Minnesota and across the country, concerns grew about health, mental health, and educational risks for these children. In 1989, we began a series of studies to document the risks associated with homelessness among Minnesota children, with the aim of informing policies and programs designed to foster the well-being of these children. In this report, we present highlights of our findings from studies focused on understanding school success among this high risk population. Improving services for homeless children requires not only information about problems and risk, but also knowledge about success and resilience.

*Percents are based on a statewide single night shelter survey conducted by the Wilder Foundation.

In This Issue

Thus, we were looking for the factors associated with better achievement and behavior as well as problems. Children who do well under these difficult circumstances may provide the best clues about what makes a difference.

Figure 1. Number of Children in Minnesota Shelters on a Single Night in November
Data from the Minnesota Department of Economic Security.
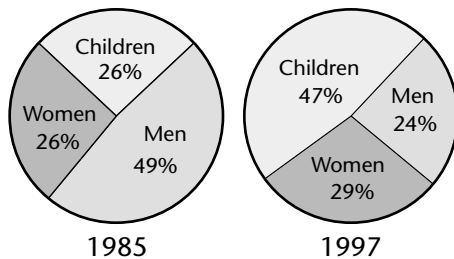
Figure 2. The Proportion of Men, Women, and Children in Minnesota Shelters on a Single Night in November
Data from the Minnesota Department of Economic Security.

Multiple Risk Factors

In our earliest studies, we learned that children living in shelters with their families shared many of the same risks as other very-low-income children. Risk factors shared by both groups included high rates of belonging to single-parent households, parents with little education, parents with low employment rates, and a history of many stressful life experiences, including moving, violence, and illness or death of parents. There were also high rates of behavioral and emotional problems among both groups of children.

We found few differences between homeless children and a matched comparison group of low income "housed" children, and the differences we did find appeared to reflect the

cover photo:
Homeless children at People Serving People, the Twin Cities' largest shelter.

current crisis in their lives. For example, homeless children had experienced significantly more stressful life events over the past year than children from similar families living in a home. T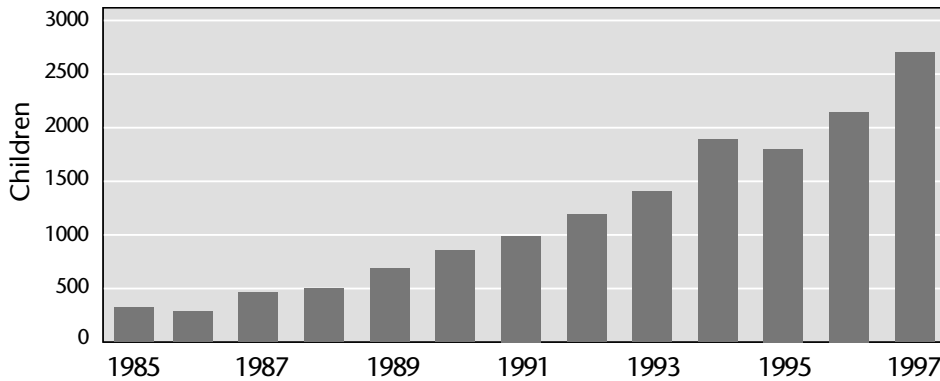he most intriguing differences we noticed were within the homeless families. Even though all of the homeless families were in crisis, it was clear that the level of risk to the children could differ quite substantially and that some children were succeeding in spite of a highly challenging situation.

Thus, the goal of the two studies reported here was to examine the linkages between risk and protective factors on the one hand and behavior related to school success on the other. Our measures of school success included both achievement and conduct indicators, since both are essential for succeeding in school. We also examined additional domains that could undermine school performance, including health problems and hunger.

Research with families in crisis presents many challenges. Parents are understandably preoccupied with finding housing. The length of the shelter stay is unpredictable and families are highly mobile after they leave, often moving multiple times within a few months as they try to secure stable housing. Yet, we have found these families to be remarkably willing to participate in our research at a difficult time in their lives. Parents typically are quite concerned about their children and value education as the most important need of their children beyond the survival basics of shelter, food, and clothing. In each of these two studies, we were able to obtain follow-up information about many of the children after they left the shelter, though in some

cases, families simply disappeared. Our analyses focused on African American children, who comprise by far the largest proportion of children from homeless families in the Twin Cities.

In 1993-94, we interviewed a representative sample of fifty-nine parents with six- to eleven-year-old children currently residing in the largest shelter in the Twin Cities. After the families left the shelter, the children were tested on standardized achievement tests, school records were secured, and teachers completed ratings about the behavior of the children in their classroom. In 1995-96 we tested a group of ninety-eight African American children, ages eight to ten, living in the two largest shelters. The demographic data for these two samples were very similar. For 1994 and 1996 samples, respectively, we found that 78 and 82 percent of the families were headed by single parents; 37 and 48 percent of the parents had not finished high school; 83 and 82 percent of the families were on welfare; 48 and 47 percent had been homeless before; 55 and 54 percent had come to the Twin Cities within the past year; and 76 percent of both samples had been homeless less than three months.

How Much Risk?

The importance of total cumulative risk in the lives of these children was examined by counting up the number of risks in a child's life, adding a point for each of the following risk factors: a parent does not have a high school degree, they live in a single-parent household, their parents are divorced, a parent has died, they have been in foster placement, they have been abused, and they have witnessed violence. Then we looked at hunger, health, mental health, and school achievement as a function of the number of risk factors in the child's life. Data clearly showed a relationship.

Figure 3 illustrates how risk was related to externalized behavior problems (such as aggressive, acting out behavior) as reported by parents. The level of behavior problems is shown in standard scores where the average score in the general population is 50 and 98 percent of the population score below 70. Scores above 60 (90th percentile) suggest a need for mental health services. Children with four or more risk factors typically fell into this "clinical range." On the other hand, children with none or few of these risk factors, children who have the resources of two
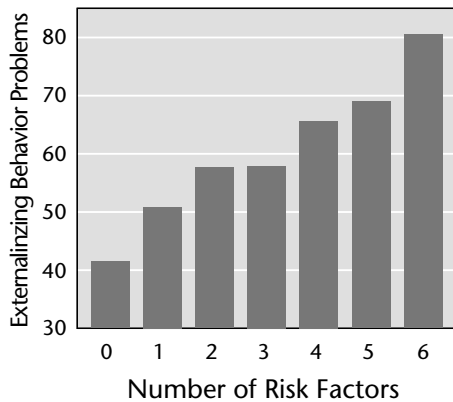
Figure 3. Parent-Reported Behavior Problems of Homeless Children Ages 8 to 10, Plotted by the Level of Risk
Average score in the general population is 50 and scores above 60 (90th percentile) suggest a need for mental health services.
Data from the 1995-96 study.

parents who are better educated and who have less stressful life histories, don't typically have behavioral and emotional problems. Results for teacher reports of behavior problems were highly similar. Moreover, as one might expect, achievement data showed a comparable pattern: children with more risk factors showed lower achievement. Children who had none or few risks and more resources had much better achievement scores.

Hunger and health also were related to risk in the expected direction. Results for hunger are illustrated in Figure 4. Our measure of hunger was based on a set of questions used in national surveys of hunger; it is a summary of answers to questions such as, "Did children ever eat less than you felt they should because
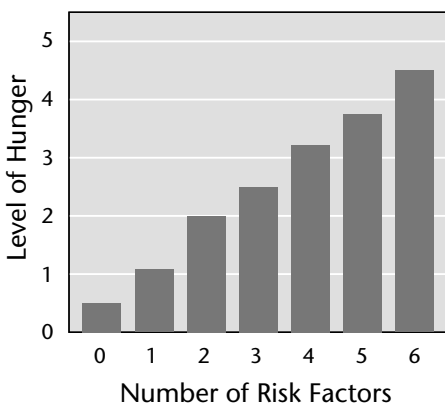

Figure 4. Hunger of Homeless Children ages 8 to 10, Plotted by the Level of Risk in Their Lives
Data from the 1995-96 study.

there was not enough money to buy food?" Given what these parents report about hunger, it is not surprising that we have found consistently since 1989 that homeless children report high levels of fear about not having enough food to eat. In 1989 and in 1995-96, three-fourths of the children (eight to twelve years old) reported fears of "having no food to eat." This rate was

We found that parents' involvement with their child's education and their closeness with their child were important predictors of the child's success in school.

about twice as high as school children in the same community, even though this community also includes a substantial number of children living in poverty.

Health problems were also related to risk status with parents of high risk children reporting many more health problems than parents of low risk children. Both health problems and hunger, clearly associated with level of risk, could adversely affect learning.

The Educational Risks
School was clearly important to these children and their parents and most of them reported very positive experiences at school. In the 1995-96 sample, for example, 94 percent of the children reported that school was very important to them and 94 percent wanted to go to college. All liked school at least a little and 86 percent liked it "a lot." Furthermore, 88 percent of the children thought their teachers cared "a lot" about them. Among parents, 98 percent

reported telling their children school is very important, 86 percent had visited their child's school during the past year, and 84 percent wanted their children to go to college.

Nonetheless, the educational risk of these children was evident in their test scores. We administered the Wechsler Individual Achievement Test - Screener because this is a new test with good norms for diverse children and can be administered quickly. For the 1993-94 sample, 80 percent of the children fell into the bottom quartile on this test (25 percent would be expected in a general population). For the 1995-96 sample, the rate was 63 percent. These figures are consistent with their school records, which show low test scores and academic delays, and findings from one of our earlier studies using a different achievement test that showed more than half of these children already two or more years behind in elementary school. This is an ominous sign for the future, as the high school drop-out rate is very high among children this far behind before they enter secondary schooling. Moreover, it was clear from school records that their academic problems often predated homeless status. Still, there were some children who had good achievement; it was important to ascertain what could account for their success.

Succeeding Despite the Odds

First, we confirmed our expectation that children who had good achievement also would have good behavior, attention, and cognitive skills. Though their numbers were small, children learning at grade level had few behavior problems reported by either parents or teachers. This suggested that there might be family differences that accounted for their success in multiple domains. In the 1993-94 study, interviews with the parents indicated that parenting was strongly related to both behavior and achievement in school.* More specifically, the parents' involvement in their child's education (through interest and participation) and their closeness with their child were important predictors of school success according to cumulative school records and teacher reports after the children left the shelter.

Both of these factors (parental involvement and closeness) were measured during the shelter stay. Figure 5 indicates the importance of good parenting for academic achievement as judged from a rating of the child's overall performance based on school records. Children who had closer relationships with parents and parents who were more involved in their education had better grades and higher test scores. Figure 6 illustrates how the same two parenting qualities were related to
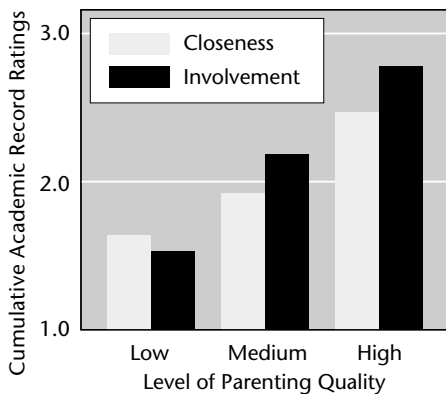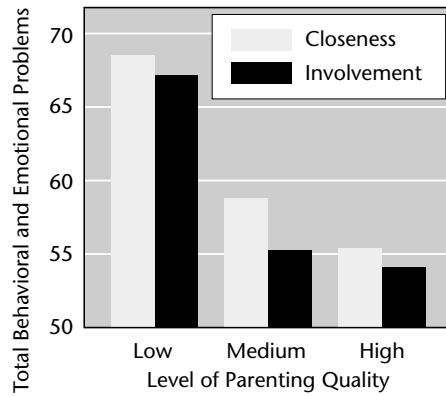
Figure 6. Teacher Ratings of Behavioral and Emotional Problems in Homeless Children, Plotted for Three Levels of Parenting
Average score in the general population is 50 and scores above 60 (90th percentile) suggest a need for mental health services.
Data from the 1993-94 study.

teacher reports of behavioral and emotional problems in the classroom. Children with involved, close parents had few behavior problems.

Finally, we examined the possibility that special school programs for homeless children could make a difference. Providing school services to address the needs of homeless children is a formidable task because the children have multiple needs, few resources, high mobility, and overwhelmed parents. The

first step is access. In years past, homeless children were blocked from attending schools by rules about permanent residency, school or health records, or transportation problems. Now, homeless children have better access to school as a result of federal and state legislation and funding. Very few of the children in our recent studies have encountered barriers to school registration or attendance. However, facilitating school success is another matter, though clearly this is a high priority goal shared by state agencies, the Minneapolis Public Schools, and these families.

In the course of our 1995-96 study, we evaluated a tutoring-advocacy program for homeless children in the Minneapolis schools. The nature of this program varied in each school, with some schools providing after-school activities, while others provided in-class tutoring or "pull-out" tutoring. Due to limited funding, only 23 percent of the elementary schools in the district were able to provide this intervention. Yet 43 percent of the fifty-six students in our study who attended Minneapolis public schools ended up in a school that had a program, indicating a good selection of schools in which to house the intervention. However, only fifteen of these children (27 percent) had five or more contacts with the intervention program, which was our criterion for inclusion in the "intervention" group. Children did

Figure 5. Homeless Children's Academic Achievement Scores, Plotted for Three Levels of Parenting
School records were rated on a five-point scale from 1 (well below average) to 5 (well above average), with scores of 3 meaning average performance.
Data from the 1993-94 study.

*These interviews were conducted by Donna Miliotis as part of her dissertation research.

Tutoring programs in the Minneapolis public schools, like this program at Broadway Elementary, have significantly improved students' relationships with their classroom teachers.

Tutored children, particularly boys, scored significantly higher in math than non-tutored children.

not have much contact for a variety of reasons, including poor school attendance. This left few children in the intervention group to compare with the rest.

Even with these small numbers, however, we found that the quality of the relationship between the child and

People Serving People is Minnesota's largest emergency shelter. It serves primarily homeless families. Sixty percent of the resident population is children. People Serving People provides families with the resources and encouragement they need in order to become self-sufficient. It provides mental health counseling, support groups, emergency clothing, nutritious meals, laundry facilities, hygiene supplies, child and family activities, tutoring programs, library, Head Start program, girl scout troop, early childhood family education classes, public school access, housing resource center, personal voicemail, health care clinic, job bank, legal aid, and chemical health counseling. It is from the help of many dedicated and caring individuals in the community that People Serving People is able to serve homeless families with kindness and efficiency. For information about what donations they need call (612) 332-4500 ext. 257. To volunteer call (612) 332-4500 ext. 256.

the classroom teacher in the intervention group was significantly more positive than this relationship for children who had received little or no intervention. There was little evidence of change in academic progress associated with intervention, but measurable changes might not emerge in the short time we could follow the children. One of our findings was especially encouraging: tutored children, particularly boys, scored significantly higher in math than non-tutored children in routine standardized tests given at school during the spring. Focus groups conducted with tutors and advocates revealed a strong consensus that the key ingredient to this type of intervention across sites and methods was the interest and individual attention from a concerned adult in the school. The tutor-advocates believed that one-to-one relationships serve to increase bonding to school and to improve attendance, two basic first steps for school success. Our observations and data suggest that interventions that involve stable attention from an adult while providing focused, positive learning experiences have considerable potential to boost the engagement and performance of these children in school.

Fostering Resilience in Homeless Children

Our studies of homeless children are highly congruent with research on children at risk for other reasons. Many of

these families live with severe adversity that can overwhelm a parent with concerns about survival needs of shelter, food, clothing, and medical care for their children. Yet even under these difficult circumstances, there is clear evidence of resilient children who are succeeding despite poverty, mobility, stress, and whatever burdens of discrimination they face due to socioeconomic status, the stigma attached to homelessness, impoverished appearance, or race.

Over the past twenty years, there has been growing attention to the phenomenon of children who succeed in spite of severe adversity. Studies of children around the world who overcome war, family violence, poverty, and many other adversities suggest that there are key protective factors that allow children to develop well under difficult conditions. At the top of that list are relationships with competent and caring adults and also good cognitive abilities, reflecting healthy brain development. Resilient children typically have fewer risk factors in their lives and more resources, both in terms of their social and individual assets. The combination of more resources and fewer risks can also be seen in the lives of children from homeless families in Minnesota who are, despite it all, successful.

Our results from studies of homeless children, particularly in the context of what has been learned from other studies of resilience, suggest that efforts to foster better outcomes in these high risk children could focus on three strategies: reducing risk, boosting resources, and facilitating protective relationships with competent adults. Of these, the prevention of risk is an important long-range strategy for our society. But for many children, it is too late to prevent the piling up of risk factors because it has already occurred. Therefore, efforts to increase the resources available to these children and to facilitate relationships with competent adults will be crucial. Resources include the basics of housing, food, clothing, and medical care, plus opportunities to develop thinking skills and other talents. Relationship strategies include one-on-one tutoring or mentoring and family education programs, plus efforts to stabilize housing and school attendance so that bonds to community and school have a chance to grow.

Developmental scientists have argued that we can learn how to improve interventions by understanding

resilient children. As more is learned about the pathways to success among children at risk, including children from homeless families, it should be possible to help the children who have lost their way, despite their dreams and the faith of their families in education, to make it back onto roads leading to success.

■ Ann S. Masten is a professor and associate director in the Institute of Child Development at the University of Minnesota. She is a licensed psychologist and coordinates the intercollege child clinical training program at the University. Her research has focused on understanding how competence develops among children at risk due to adversity and socioeconomic disadvantage, with the goal of informing interventions and policy to foster better development among high risk children and youth. She directs the Project Competence study of 205 Minneapolis school children followed from childhood to adulthood. Since 1989, she has conducted studies of homeless children in Minnesota and also young Cambodian refugees who survived the Pol Pot regime. Professor Masten has published numerous articles on competence, risk, and resilience in children and youth. She has been invited to speak about resilience and homelessness to scientists, educators, clinicians, lawmakers and policymakers, at the local, state, and national level, as well as in Canada and Europe.

Arturo Sesma, Jr. is a doctoral candidate in child psychology at the Institute of Child Development at the University of Minnesota. He has given conference presentations and published papers on the academic and psychological functioning of children homeless in Minnesota. He has interests in how friendships aid in adaptation for children living in poverty, as well as in using psychological research to inform public policy affecting children and families.

Rural Community Assistantships

A new University of Minnesota initiative has been launched to develop more effective partnerships with Minnesota's rural communities. Student assistance with applied research, program planning and development, evaluation, and other short-term projects is being offered to communities in southeastern and south-central Minnesota. The new program is a partnership effort of the University of Minnesota (through its Rural Development Council), The Initiative Fund of Southeastern and South Central Minnesota, and local communities and organizations. CURA serves as the fiscal agent for the project and as a member of the University's advisory committee.

Rural Community Assistantships will help meet community needs while giving students career-related experience. Communities apply to the program with a project that will benefit from student skills and expertise. Early pilot projects have included agritourism, city park planning, land use planning, youth leadership, restructuring county services, and economic analysis.

Projects that are approved will have funding available for a student stipend and in some cases travel and other related costs may be covered. The University provides help in the application process and in identifying students who might work on the project. The community chooses the student. Rural Community Assistantships are funded through contributions from the University, in-kind support from other groups, and a $75,000 grant from the McKnight Foundation. If the initial eighteen-month program in southeastern and south-central Minnesota is successful, it will be expanded into other areas of the state. For more information about the project, contact the community liaison Roger Steinberg, University of Minnesota Extension Service, Southeast District Office in Rochester (507) 280-2867 or the campus liaison Carla Carlson, Rural Development Council (612) 624-5260.

GrandNet: A Community Electronic Network in Rural Minnesota

by Libby Dresel, Melinda Jackson, Eric Reidel, Eugene Borgida, and John Sullivan

GrandNet computers at the public library have become a popular destination for library patrons in Grand Rapids. Here a librarian shows a patron how to use the Internet to find information on starting an at-home business.

These days you can't read a newspaper without coming across some mention of the Internet. A company may be announcing new services or products available through "electronic commerce," the latest sites for games and entertainment may be reviewed, Congress may be debating ways of regulating Internet usage, or the newspaper itself may refer you to its website for more information about a particular story or topic. The increasing profile of Internet technology and resources in our daily lives seems to imply that such technology has become universal, or at least commonplace. But what if you don't live in a metropolitan area? What if you live in a rural area where the economic resources to support Internet access are not likely to exist? What if the infrastructure to support new technology is slow in coming because the area you live in is sparsely populated? Will your community fall behind culturally and educationally because of the lack of Internet access? Can widespread Internet access resolve some of the disparities between rural and urban communities?

The 1996 holiday season at Balsam School, Minnesota's fourth smallest rural public school, was brightened by the addition of a new computer and an Internet connection, courtesy of the GrandNet project.

"You can't stop technology, but we can use it to improve things here so we can maintain our way of life."

— **Grand Rapids focus group participant**

GrandNet: A Local Initiative

For Grand Rapids, a city of about eight thousand people in Itasca County in north-central Minnesota, these questions have become not just idle wondering but the motivation behind a community electronic networking project. In 1995, the superintendent of schools for the area convened a meeting with leaders of other local agencies to discuss their mutual technology needs and how they might address them collectively. From this, the GrandNet project was born. Joining Independent School District #318 as partners in GrandNet were the Grand Rapids Public Library, Itasca Community College, Itasca County Health and Human Services, and the Itasca Development Corporation. Their goal was to establish an electronic network that would address each partner's technology needs and provide a valuable resource for the entire community. In the long run, they hope to establish universal access by supplying a networked computer to every household in the area—an ambitious goal for any local coalition.

With financial support from the Blandin Foundation and the federal Telecommunication and Information Infrastructure Assistance Program, they have achieved their goal of electroni-cally linking the partner agencies into a wide-area network which is connected to the Internet. This provides the inter-connectivity they were seeking and opens up communications with the rest of the computing world. GrandNet public access computers with Internet access are now available for use in the Grand Rapids Public Library and in the Itasca Resource Center. Also in conjunction with GrandNet, school district computer labs with public access have been created or upgraded, and computer training has been made available to an increasing number of students, teachers and community members.

The implementation of this first phase of the GrandNet project has been a prime example of a bottom-up community effort, where every step of the process has been initiated and decided on by the partner agencies involved. While this bottom-up approach has encountered some bumps in the road along the way, the GrandNet partners are now exploring ways to expand the network's impact, both geographically, to include more of Itasca County, and functionally, as they consider other possible uses for the network and ways it can serve the community and its members.

Why Study GrandNet?

The establishment of a community electronic network in Grand Rapids provided our research group at the University of Minnesota's Center for the Study of Political Psychology a unique opportunity to study the impact of such a network on the community. While many community electronic networks have been established in a variety of settings in recent years, they have rarely been studied in any systematic manner. When studies are conducted, they are usually evaluation studies, focusing on the mechanics of the network and on who uses it and when. Our study of the GrandNet project focuses instead on the socio-political impact of the network on the community. Will people in the community interact less or more because of the new network? Will partic-ipation in civic affairs and local politics increase or decrease because of the new method of communication? Will students be better prepared for the job market because of increased access to and training in computer technologies, and, if so, how will the community be affected by this? Will more young people move to larger cities for jobs, or will better local jobs be developed because of the new network?

In fact, such questions are of great interest to those who study patterns of social interaction and civic participa-tion. Political scientists and social psychologists have begun to examine the nature of voluntary associations and community involvement in recent years, and examining these themes in relation to the forms of communication that have emerged from new technolo-gies presents an important and exciting interdisciplinary research opportunity for scholars. As more communities focus on expanding public access to electronic media, finding answers to questions about the impact of such efforts becomes critical.

Another advantage to this particular study of a community electronic network is the opportunity to compare Grand Rapids to a similar community that does not have the same sort of network. To select a comparison community, our research group used a

cluster analysis of data points that included a large number of demographics such as age and gender, as well as social indicators such as the teenage pregnancy rate and the number of people in chemical dependency programs. The best match was Becker County, where the largest and most comparable city to Grand Rapids is its county seat, Detroit Lakes. Using Detroit Lakes as a comparison community allows us to better isolate effects particular to GrandNet while controlling for general trends operating in all of outstate Minnesota during the course of the network's implementation and expansion.

Our project began in the fall of 1996 and if funding is available we expect it to continue for the next few years. Data will be collected at various times throughout the project to assess the variety of changes that might be expected in an isolated, rural community as the result of an electronic network. For example, we plan to conduct additional surveys in the Grand Rapids and Detroit Lakes communities over the next three years to provide a time series to be compared to the baseline data reported here. This statistical analysis will be supplemented by focus groups with community residents, interviews with select individuals and community leaders, and monitoring of community news and events through the local newspapers. This combination of quantitative and qualitative methods provides a more comprehensive basis for investigation than either approach on its own.

What Have We Learned So Far?

We have collected baseline data in both Grand Rapids and Detroit Lakes over the past year. After interviewing GrandNet partner representatives and community leaders and conducting focus groups with business people, teachers, students, and other community members in Grand Rapids, we mailed a questionnaire to random samples of citizens in both cities. The samples were taken from both voter registration and phonebook records in order to compensate for the selection biases inherent to each source. One thousand residents in each community received the survey, and 40 percent of the recipients in each city returned completed surveys.

The surveys included questions in the following areas:

▸ Demographics such as age, gender, education, income, subjective social class, and marital status

▸ Attitudes toward the respective communities and satisfaction with life in them

▸ Attitudes toward computers and their use and role in society

▸ Presence in the home of a variety of communications devices, including computers and Internet access via modems

▸ Experience with computers and computer training

▸ Indices of political behaviors, political efficacy, interest in politics, and political knowledge

▸ Frequency of engagement in various forms of social interaction

▸ Measures of alienation and interpersonal trust

▸ Attitudes toward different subgroups in the community

▸ Membership in various types of community groups and organizations

▸ Knowledge of, experience with, and evaluations of the GrandNet project (Grand Rapids respondents only).

Analysis of the baseline data so far has shown that the Grand Rapids and Detroit Lakes communities are indeed a good match. Statistical tests show survey respondents in the two communities were very comparable in terms of demographic characteristics, attitudes toward computers, political behaviors and interest in politics, and patterns of social interaction.

"Once you get a hold of something and are not afraid of it, then you just use it."

— **Grand Rapids focus group participant**

What do the Grand Rapids and Detroit Lakes surveys tell us about computer ownership and usage? About 43 percent of respondents in both cities have computers in their homes, and about 23 percent of respondents have Internet access from their homes. Both of these figures are slightly higher than the national rates of ownership (41 percent) and Internet access (21 percent) reported at the time the surveys were conducted, although such comparisons must be considered in the context of rapidly changing rates of computer and Internet access today. Whereas just over 30 percent of survey respondents have never used a computer, nearly 20 percent use one every day, apart from work. One-quarter of the respondents
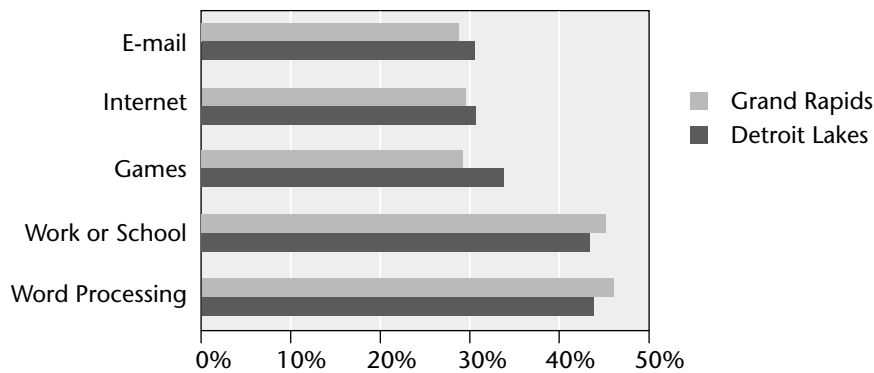

The Balsam Senior Citizens Club meets once a month at Balsam School to use the school's GrandNet Internet connection and exchange ideas on use of the web. One of the club members designed and maintains the school's webpage.

Figure 1. Baseline Comparison of Computer Use in Grand Rapids and Detroit Lakes

have used a public access computer, and over 10 percent have used one at the home of a friend or relative. The most common uses respondents report are (in order of use) word processing, work- or school-related tasks, games, Internet access, and e-mail (Figure 1). One of the few areas where Grand Rapids and Detroit Lakes differ is in the amount of computer training respondents have received (Figure 2). Grand Rapids respondents have had more training, particularly in word processing and database use. While rural Minnesota communities may be behind some metropolitan areas in computer usage, these findings show that they are by no means left out of the picture. Nevertheless, in Grand Rapids there was enough concern about being left behind to provide the impetus for the GrandNet community networking effort.

"We should be teaching everyone to use a computer—that's where the future is."
—Grand Rapids focus group participant

In terms of attitudes about the role government should play in relation to new technology, survey respondents from these two communities show some significant differences, especially with regard to civic orientation. Grand Rapids respondents were significantly more likely than respondents from Detroit Lakes to agree with the statements *"Government should support access to computers for all people so that no one gets left behind,"* and *"Government policy toward computers should take into account the opinions of ordinary citizens, not just experts."* This greater support for an active public role in providing access to new technology among Grand Rapids respondents is consistent with a general pattern of civic engagement. Survey

respondents from Grand Rapids were also significantly more likely than Detroit Lakes respondents to agree that *"People in [this] community share a common goal for the community,"* and to have participated in forming a new community group within the last two years. In addition, in response to a scale that measures one's sense of alienation (with items such as *"The people running the country don't really care what happens to you,"* and *"Most people try to take advantage of people like yourself,")* Detroit Lakes respondents reported feeling more alienated, on average, than their Grand Rapids counterparts.

These differences in attitudes between Grand Rapids and Detroit Lakes survey respondents point to differences in civic involvement in the two communities that may help to account for the collaboration among community agencies that led to the development of GrandNet in Grand Rapids. This active civic orientation may also determine the project's long-term success or failure. These are some of the issues that our research group will address as we continue to examine the impact of
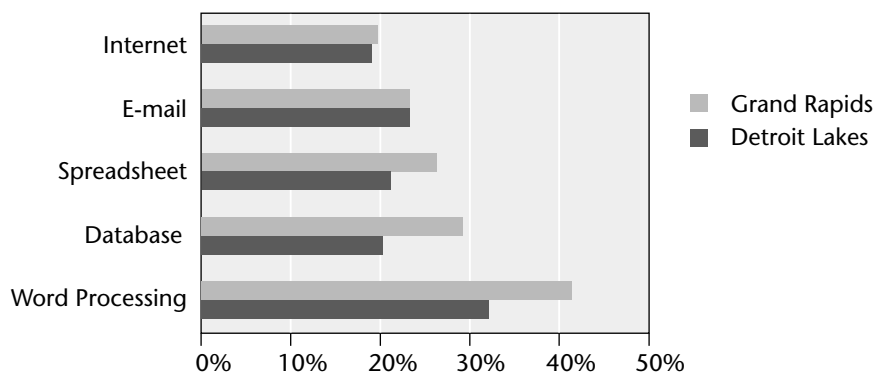
GrandNet in Grand Rapids and Itasca County over time.

"I think everyone could benefit that chose to be a part of it … the problem is going to be getting people involved."
— Grand Rapids focus group participant

At the present time, access to and knowledge and use of computers in Grand Rapids are strongly related to one's family income level. Our results suggest that when technological innovations such as computers first become available in the marketplace, economic resources tend to dictate initial access. Individuals with relatively high incomes can obtain access to computers rather quickly and effortlessly, thereby investing in their future and gaining a competitive advantage over others. In short, laissez faire capitalism works extremely well for them.

A project like GrandNet, however, allows another segment of society to gain access to computing knowledge and resources. Our baseline data suggest that non-economic resources determine who is next most likely to be aware of, take advantage of, and support this community technology initiative. Among a variety of variables, the strongest predictors of knowledge of the GrandNet project were found to be local political knowledge and extent of computer training. Actual use of the GrandNet computers was also most strongly correlated with political participation and previous computer training and usage. Finally, having positive expectations of the GrandNet project was most strongly and directly related to using the project's computers, having a generally positive attitude toward computers, and being involved in and

Figure 2. Baseline Comparison of Computer Training in Grand Rapids and Detroit Lakes

having a strongly positive attitude toward the community of Grand Rapids. These results therefore suggest that economic capital is not the only consideration in how citizens react to a community electronic network.

"There are more and more people who get computers but not everyone's got one. Not everyone can afford it."

— **Grand Rapids focus group participant**

But the survey results also point to a third segment of the community: those individuals with no economic advantage, little political knowledge or participation, and low positive attitudes toward the community. These are the people least likely to be able to adopt new technologies using their own resources. Unfortunately, they are also hindered from adopting them through a public effort like GrandNet by their lower knowledge of and involvement with the local community. Less awareness of GrandNet can also feed less positive expectations for it and further decrease its possible benefits for these community members. Community electronic networking projects like GrandNet need to make special efforts to include this segment of the population, which could potentially be among the greatest beneficiaries of the network. These are the community members at greatest risk of being left behind as the information technology revolution moves ahead, and they have the most to lose if they do not learn to take advantage of the new opportunities and resources such technology can offer.

What's Next For GrandNet?

Looking forward, the GrandNet partners are now seeking to expand the network into Itasca County and to broaden the scope of its resources for the community. Part of this next phase of growth is likely to include cooperation between the public and commercial sectors, with local businesses coming on board to both support the community network and benefit from the electronic infrastructure it provides. The GrandNet partners will continue to work toward the goals of increasing access to the network and developing more opportunities for citizen input and involvement via this new channel of communication. They do this in the context of changing telecommunications law and increased competition, and as they move ahead their choices are likely to be shaped and

limited, at least in part, by such aggregate political, legal and economic factors.

Our research team will continue its study of the implementation and evolution of GrandNet over the next several years. Subsequent surveys of residents in the Grand Rapids and Detroit Lakes areas will be compared to the baseline results reported here to identify and track changes in attitudes and patterns of civic involvement and communication in these two Minnesota communities. This analysis will be further informed by behavioral measures and additional focus group and interview data. By focusing on the social and political effects of a local community electronic network such as GrandNet, we hope to elucidate the ways in which technologies like the Internet have the potential to transform rural Minnesota communities and similar communities everywhere.

■ Libby Dresel is a doctoral candidate in social psychology at the University of Minnesota. Her research interests include political psychology and intergroup relations. Melinda Jackson is a doctoral candidate in political science at the University of Minnesota. Her interest in political psychology also includes research linked to questions about political identity and social capital. Eric Reidel is a doctoral candidate in political science at the University of Minnesota. His specialties are political psychology and political theory.

Eugene Borgida is professor and chair of the Department of Psychology at the University of Minnesota. His research interests include social psychology, psychology and law, and political psychology. He is co-director of the University's Center for the Study of Political Psychology. John Sullivan is a professor of political science at the University of Minnesota, specializing in political psychology and research methods. He is a CLA (College of Liberal Arts) Scholar and co-director of the University's Center for the Study of Political Psychology.

Main Street in Minnesota

The Main Street program was developed in the 1970s and 80s in response to the rise of shopping malls and discount stores, which were devastating the market potential and historic character of Main Streets across the county. The program created an economic development strategy based on historic preservation that has since been widely used. Two graduate student research assistants at CURA have recently completed a study of the history and impact of the Main Street program in Minnesota. They examined old records, conducted interviews, and surveyed the twenty-seven Minnesota communities that have tried the program. Their report—*Main Street Impact Project*—provides both qualitative and quantitative information about how Main Street has worked in Minnesota. The report looks at state programs in Iowa, Wisconsin, New Hampshire, and South Carolina as well as the city of Boston to document the "best practices" of these Main Street organizations. It presents a narrative story of how Main Street developed in each of Minnesota's participating communities along with the survey results from these communities. This project report (by Katie Burns and Stephanie Kellner) was prepared for the people who are currently discussing whether or not to recreate a statewide Main Street program in Minnesota and if so, how. A limited number of copies of the report are still available free-of-charge from CURA. Phone 612/625-1551 to obtain a copy.

Project Awards

To keep our readers up to date about CURA projects we feature a few capsule descriptions of new projects underway in each issue of the CURA Reporter. In this issue we present projects awarded grants through U-ACT (University Access for the Community). U-ACT is a relatively new program at CURA, begun in 1996 to encourage stronger links between the University and community organizations of color. U-ACT awards personnel grants to nonprofit community-based organizations of color seeking help with applied research, program development, evaluation, or other issues identified by the organizations. The grants fund graduate students. Each student hired has both a faculty and a community mentor. Students are given the chance to make a significant contribution while organizations gain technical or research help for an extended period of time (one University quarter or longer). Information about other University resources is shared on an ongoing basis with the participating community organizations. U-ACT is a cooperative effort of several University of Minnesota units, including the College of Education and Human Development, the College of Architecture and Landscape Architecture, the Humphrey Institute, Minnesota Extension Service, and CURA. The projects listed here are among those funded during fiscal year 1997-98.

▶ **KMOJ News Department.** KMOJ radio, a community station for African Americans in the Twin Cities area, wants to create a viable news department. A graduate student from the University's School of Journalism investigated how three other community radio stations gather news, structure their news department, and select what will be broadcast. Based on this background the student recommended how KMOJ should set up their department. Training requirements for interns and how they might be used were also spelled out. A partnership between the School of Journalism and KMOJ was established to help in guiding the station as it creates a newsroom and to provide internship opportunities for journalism students.

▶ **Hispanic Education Fair.** A graduate student assisted in planning, implementing, and overseeing the fifteenth annual Hispanic Education and Career Fair, sponsored by the Minnesota Hispanic Education Program. The fair, held at Minneapolis Community and Technical College, attracted over 300 high school students and more than forty colleges, universities, and technical schools. Designed to encourage Latino youth to pursue postsecondary education, the fair featured exhibits by the various schools, career workshops, information and timelines about the college admissions process, and workshops on preparing for college as well as workshops for high school counselors on Latino high school performance issues. The U-ACT intern recommended that the fair be expanded from a half-day to a full day or more in the future.

▶ **History and Impact of the Thomas-Dale Block Club.** A graduate student prepared a history of the Thomas-Dale Block Club. Fifty-two people were interviewed and police records were also examined. In her report, the U-ACT intern concludes that the block club has changed the outlook of the entire community and helped turn the tide in a rapidly declining neighborhood. The report recommends that the block club work on including the growing Asian community in their organization and compile documentation showing the major decline in the number of drug houses and the incidence of crime during the 1990s after the block club was formed.

▶ **Youth Entrepreneurship Classes.** The St. Paul Urban League wanted to expand its successful Youth Entrepreneurship program, which helps high school students who are considered at risk to create their own jobs and prepare for the world of work. A graduate student observed the instruction of three Youth Entrepreneurship classes, team-taught three classes with a certified instructor, and solo-taught six classes. The student also participated in an assessment of the course.

▶ **Wind Energy for White Earth.** The White Earth Land Recovery Project (WELRP) is seeking to rebuild a sustainable community on the original land base of the White Earth Indian Reservation in northwestern Minnesota. Part of their goal is protecting the environment. This project explored harvesting wind energy for the reservation community. Two potential sites in Mahnomen County were monitored for wind energy power. Various production possibilities were explored. Current federal and state energy production deregulation was researched. Links with organizations and individuals active in promoting renewable energy production were made in Minnesota, nationally, and internationally. During the course of the project, WELRP received a $37,000 federal grant to continue wind energy development at the reservation. The U-ACT intern now serves as WELRP's representative to the Sustainable Energy for Economic Development (SEED) Project coalition.

Violence Against Women in West-Central Minnesota

by Jon Anderson, Marion Kershner, Dianne Long, and Gina Garding

It has been estimated that violence against women may occur in as many as one out of every four households. Abuse is now recognized as a serious public health problem. In addition to the emotional, social, and physical damage that women sustain, domestic violence also brings an increased need for health care and rising outpatient medical costs to the community. We are just beginning to understand the impact of domestic abuse on society, but it is clear that the impact is considerable.

Studies typically report that from 5 to 20 percent of women have experienced abuse recently, and from 20 to 50 percent have experienced abuse at some time in their lives. Almost all of these studies have been conducted in urban areas. Can the findings be extended to rural areas? And in particular, do they apply to rural Minnesota? The study reported here sought to answer these questions by surveying the situation of women in west-central Minnesota.

This study was a community-based research project carried out in cooperation with Ottertail County Public Health and the Region 4 Council on Domestic Violence. It was intended to measure the extent of domestic violence among women seeking care in rural Minnesota, to learn what variables are associated with abuse there, and how much knowledge these women have of the help that is available for them. These data have important implications for health care providers, social service providers, and law enforcement people in rural areas. They provide information that will directly affect policy development and practice in west-central Minnesota.

How the Study was Conducted

The health care setting has long been recognized as a valuable entry point for abused women who need help. This is especially so for rural women who often live in isolation. The health care setting is also a logical place to survey rural women. During the first few weeks of

Health care settings are a valuable entry point for abused women who need help. We surveyed women in WIC program sites, like the one shown here, as well as in clinics across west-central Minnesota.

1997, we surveyed adult women seeking care in eight medical clinics and seventeen WIC (Women, Infants, and Children)* program sites in nine counties of west-central Minnesota (Figure 1). These are the counties served by the Region 4 Council on Domestic Violence, the only source of legal advocacy and of shelter for abused women and their children in the region.

Data were collected in villages and cities ranging in population from 543 to 12,874. In addition, one medical clinic located across the state border in South Dakota was used as a data collection site because it serves many women living in the Region 4 area. The WIC program sites were located within county public health departments and were staffed by

*WIC is a federal program administered by the U.S. Department of Agriculture. It provides supplemental nutrition for pregnant women and nursing mothers, promoting optimal child growth and development.

public health nurses or else had access to public health nursing services.

Before the survey was conducted, medical clinic nurses and WIC staff in all locations were trained in survey administration by Marion Kershner and a women's advocate. Date of visit, birthdate, and marital status were recorded on a contact log for each woman who came in for care. Reasons for exclusion from the study were also recorded on the contact log. A woman was considered ineligible if her partner was present, or if she was impaired due to acute illness, diminished mental capacity, severe developmental disability, serious visual deficiency, physical disability, illiteracy, or a language barrier. Women who appeared with their partner were excluded as a safety measure. A hovering partner is a well-documented characteristic of an abusive relationship, so it is likely that some abuse cases were excluded.
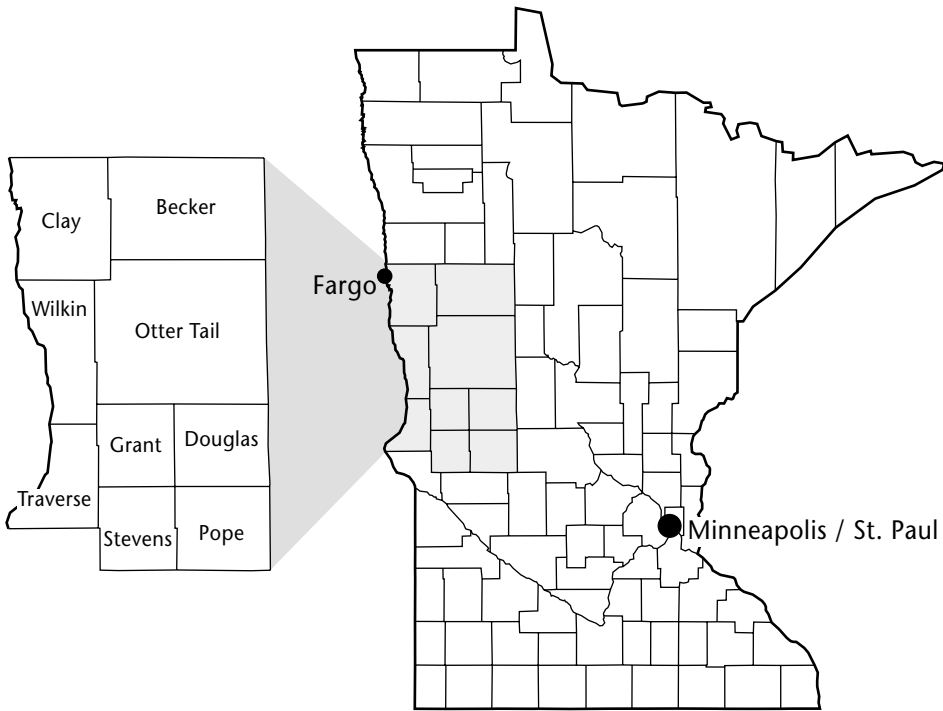
Women were offered the survey

Figure 1. Location of the Study Area

during their waiting time in the physician's examining room or following their appointments with WIC personnel. The voluntary nature of the survey was stressed and anonymity was guaranteed. Completed surveys were sealed in envelopes and held in a secure box on site. During the study period the contact logs showed there were 2,053 women eligible for inclusion in the study. Of these, 1,693 agreed to complete the survey, a response rate of 82.5 percent.

The limitations of this study should be considered when evaluating the findings. First, the study relied on staff at the various sites to present the survey in a consistent manner. The women surveyed were selected as a "convenience" sample. Two-thirds of the survey sample came from clinics, where, as the literature on abused women reports, abused women are likely to go when they need medical assistance. It should also be noted, again, that women who arrived at the survey site with a partner were excluded from the study. We expect that their exclusion actually tended to give us an undersampling of the true extent of current abuse.

The Measures of Abuse

The women who participated in this study were considered to be experiencing current abuse if they answered yes to any of the following questions:

1. "During the past 12 months have you been physically abused? This includes being hit, slapped, kicked, pushed, choked, grabbed, or otherwise physically hurt by someone else."

2. "During the past 12 months, have you been emotionally or verbally abused? This includes yelling, swearing, put downs, threats, jealousy, stalking, and other words or actions intended to control another person."

3. "During the past 12 months, have you been sexually abused? This includes any kind of forced or unwanted sexual activity."

The same three questions were used to ask about abuse prior to the age of eighteen and about abuse after that age but before the last twelve months.

Who Was in the Sample?

The 1,693 women who participated in the study provided a cross-section of women from west-central Minnesota (Figure 2). Two thirds of them filled out our survey at a clinic, while the other third completed the survey at a WIC site. More than half had completed some education beyond their high school degree. Well over half were also married, while close to one-quarter were single. The largest number of women in the survey reported incomes under $20,000, with a substantial portion unable or unwilling to report their income.

The median age of those who completed the survey was 35. They were overwhelmingly White (94 percent). Other racial or ethnic groups were American Indian (4 percent) and Hispanic, Asian, and African American (less than 1 percent each). The racial composition of the sample was roughly consistent with the population of the region as a whole, with two exceptions. American Indians constitute 1 percent of the overall population, but appear as 4 percent here because two survey sites

Telephones are a valuable communications link for abused women, particularly in isolated rural areas. The Region 4 Council on Domestic Violence offers a crisis telephone line (pictured here) and plans to offer more cellular phones to at-risk women as a result of the survey findings.
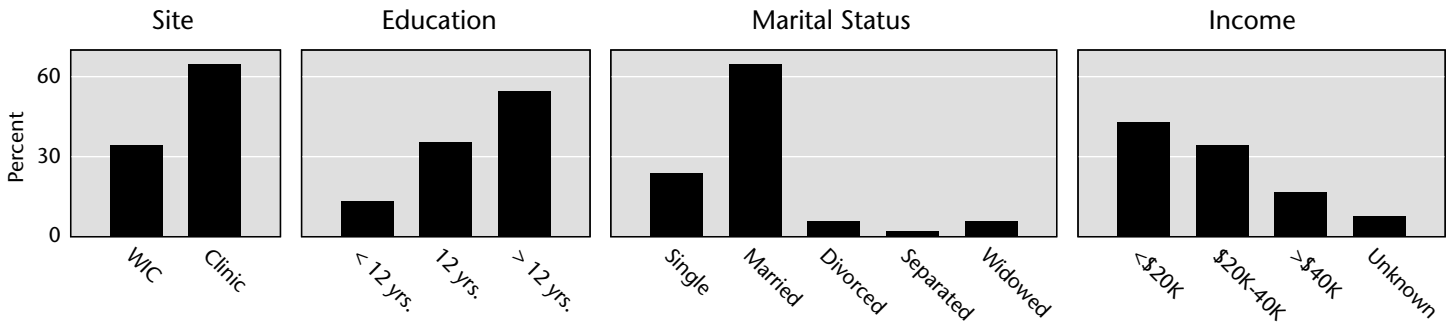
Figure 2. Some Characteristics of the Sample

were heavily used by Indian women. The sample is also younger than the population as a whole. This was expected, because WIC sites are geared to young women in their childbearing years. The difference in age of women using WIC sites and clinic sites was substantial (Figure 3). The boxplots show that the median or typical age of women at WIC sites was twenty-seven years, while at the clinics it was forty-one. The range of ages was also greater at the clinics.

The Extent of Abuse

Our analysis of current abuse examined three components: physical abuse, emotional and verbal abuse, and sexual abuse. When all three of these compo-
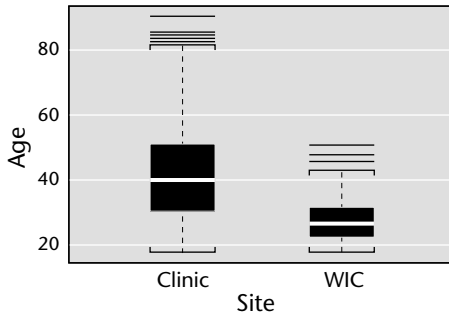

Figure 3. Age Distribution for Sites Used in the Study

nents are combined, we find that 21.4 percent of the women reported some kind of abuse within the past year. When the components are examined separately, we discover that emotional and verbal abuse is by far the most common form of abuse and sexual abuse the least common (Figure 4).

The impact of our sampling strategy is particularly evident in Figure 4. The women surveyed at WIC sites were much more likely to have experienced each type of abuse than those surveyed at the clinics. When all three types of abuse are combined for the study sites, we find that 27 percent of the women at

WIC sites and 18.3 percent of the women at clinics reported some type of current abuse. The profile of the clinic sites most closely matches the demographic profile of our region.

When we look at the abuse experiences of these women over the course of their lives we find that the extent of abuse is even larger (Figure 5). More than a third of the women (35.1
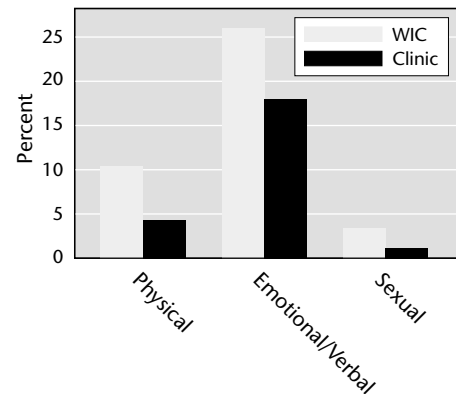

Figure 4. Current Abuse (Experienced within the Last Year)

percent) were abused before the age of eighteen. During their adult years, excluding the twelve months before our survey (which we call *current abuse*), 37 percent were abused. Overall, the level of abuse reported by these 1,693 rural women is quite similar to the levels of abuse reported in the literature for women in urban settings.

Variables Associated with Abuse

In addition to learning about the extent of abuse, it is helpful to know what the risk factors are for abuse. Is it true, for example, that poor women and uneducated women are more liable to be abused than others? What characteristics among women indicate that they are more likely to be abused than others? Being aware of these predictor variables can be helpful in devising effective intervention strategies.

We analyzed a number of demographic characteristics that might be predictor variables for current abuse (Table 1). Our findings are shown as odds ratios, a way of measuring the risk of current abuse for each characteristic. Within each characteristic except the first there are two or more categories. The odds are calculated by comparing these categories. The category chosen as the reference category is indicated with an asterisk. In the first characteristic (age), the odds are calculated for each additional year of age.

After each odds ratio we also give the confidence interval (CI). Our data show that there is only a one-in-twenty chance that the odds ratio does not fall between the two numbers listed in the confidence interval. The odds ratio itself is our estimate of where the number actually falls. An odds ratio of 1.0 means that this category has about the same risk of abuse as the reference category. Odds ratios above 1.0 indicate a greater risk of abuse than the reference category, while odds ratios below 1.0 indicate less risk.

We calculated the odds ratios in two ways: as a simple odds ratio and as an adjusted odds ratio. The simple odds
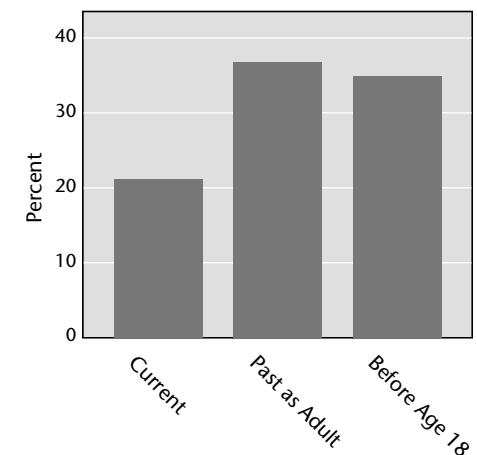

Figure 5. Total Abuse (Experienced over the Life Span)

Table 1.
Demographic Characteristics Related to Current Abuse

Characteristic	Simple Odds Ratio (CI)	Adjusted Odds Ratio (CI)
Age (for each additional year)	.96 (.95, .97)	.97 (.96, .99)
Surveyed at WIC site		
No	*	*
Yes	1.65 (1.3, 2.10)	.89 (.67, 1.18)
Education		
< High school graduation	.96 (.64, 1.42)	.97 (.74, 1.28)
High school graduate	*	*
> High school graduation	.99 (.76, 1.28)	1.00 (.65, 1.54)
Race		
White	*	*
Non-White	1.95 (1.25, 3.04)	1.25 (.77, 2.03)
Marital status		
Single	2.70 (2.06, 3.53)	2.12 (1.58, 2.85)
Married	*	*
Divorced	2.33 (1.45, 3.75)	2.51 (1.54, 4.09)
Separated	6.90 (3.39, 14.01)	6.49 (3.12, 13.48)
Widowed	.06 (.01, .42)	.13 (.02, .96)
Annual income		
<$20,000	1.65 (1.25, 2.18)	1.16 (.84, 1.16)
$20,000--$40,000	*	*
>$40,000	.69 (.45, 1.05)	.75 (.48, 1.16)
Don't know	1.09 (.61, 1.81)	.67 (.38, 1.17)
Recent change in marital status of women who are single		
No	*	*
Yes	4.93 (3.6, 6.75)	5.76 (3.33, 9.98)
Recent change in marital status of women who are <u>not</u> single		
No	*	*
Yes	4.93 (3.6, 6.75)	1.99 (1.21, 3.29)

Reference categories are denoted with an *. CI = Confidence Interval.

ratio was computed using only the data about current abuse for each characteristic. It is a good place to start examining what factors are related to current abuse. The adjusted odds ratio takes into account other variables, as well, that may be influencing the data for any given characteristic. It represents a second step in the analysis and makes use of logistic regression modeling.

The difference in the two types of ratios is evident for the characteristic "surveyed at WIC site." Here the simple odds ratio indicates that the women surveyed at the WIC sites experienced more current abuse than those surveyed at clinics (the reference category). But this simple ratio fails to consider that the women surveyed at WIC sites were typically younger than those surveyed at clinic sites. We know that younger women tend to be exposed to more volatile dating and marital relationships than older women. In the adjusted odds ratio we adjusted the ratio not only for

the important variable of age, but also for education and marital status. The adjusted odds ratio is significantly different from the simple odds ratio.

What did we learn about current abuse from this analysis? The characteristics that are indicators of increased risk of abuse are age, marital status, and a recent change in marital status (Table 1). The data about age indicate that the older a woman is the less risk she has of current abuse (.96 and .97 with each additional year of age). The estimated odds ratios and confidence intervals are all less than 1.0 and this conclusion holds for both the simple and adjusted analyses. The other way of putting it is that the younger a woman is, the more risk there is of abuse.

Marital status was analyzed using married women as the reference category. The odds ratios and confidence intervals for single, divorced, and separated women all show increased risk of abuse when these women are compared

with married women. Women who are separated from their husbands are seven times as likely to be abused as married women (6.90) and even when other factors are taken into account they are more than six times as likely to be abused (6.49). Women who are widowed, on the other hand, show significantly less risk when compared with married women (.06 and .13).

A recent change in marital status is also strongly associated with an increased risk of current abuse in our analysis. Moreover, the adjusted odds ratios show that the effect of a recent status change depends on what type of marital status the woman has. There is a significantly higher risk of abuse for single women (5.76) than for other women (1.99).

The other characteristics that we examined—site, education, race, and income—proved to be insignificant as indicators of an increased risk of current abuse. Though the simple odds ratios indicated a higher risk of abuse among women surveyed at WIC sites, non-White women, and those with incomes under $20,000, when the data were adjusted to take into account age and other important variables (the adjusted odds ratio), there did not appear to be a statistically significant relationship between these characteristics and current abuse. In examining the adjusted odds ratios to reach this conclusion, we looked at both the estimated ratio and the confidence interval. When the confidence interval contains the plausible value of 1.0, it indicates that there is no statistically significant relationship.

Our survey of women in west-central Minnesota also looked at a number of isolation characteristics that we felt might be related to the risk of current abuse (Table 2). The analysis showed, in fact, that women with low access to vehicles were more than twice as likely to be abused (2.40 odds ratio) as those with easy access to a vehicle. Women with low access to a telephone were at even greater risk (3.55 odds ratio). Women who had few contacts with people outside their household were also at greater risk, with the risk increasing as the number of outside contacts diminished (1.45 odds ratio for two to four contacts per week and 2.12 odds ratio for one or no contacts per week). The adjusted odds ratios are not given here, but we found that these isolation factors were statistically signifi-

Table 2.
Isolation Characteristics Related to Current Abuse

Characteristic	Number Abused	Percent Abused	Total Number	Odds Ratio (CI)
Low access to a vehicle				
Yes	88	36	245	2.40(1.79, 3.22)
No	256	19	1351	*
Low access to a telephone				
Yes	74	45	163	3.55(2.54, 4.97)
No	273	19	1440	*
Person contacts outside household				
0-1 per week	60	32	186	2.12(1.49, 3.00)
2-4 per week	103	25	419	1.45(1.10, 1.91)
Other	176	18	958	*
Employment characteristics				
Full time	131	23	576	*
Part time	93	22	415	.98(.73, 1.33)
Seasonal	6	15	41	.58(.24, 1.42)
Unemployed	99	22	359	1.29(.97, 1.75)
Retired	16	8	193	.31(.18, .53)

Reference categories are denoted with an *. CI = Confidence Interval.

cant even after we had adjusted for other important variables.

We also examined employment characteristics (Table 2). Retired women showed significantly less risk of current abuse than women working full time, but part time workers, seasonal workers, and the unemployed showed no significantly different levels of risk than women who worked full time. When we adjusted for other important variables, however, we found that there was no relationship at all between employment in any of these categories and current abuse.

The relationship between past experiences of abuse and current abuse was very strong among the women in our sample (Table 3). The simple, unadjusted odds ratios showed that women who had been abused as children or youth were six times more likely to be abused currently (5.90 odds ratio) than women who were not abused before they were eighteen. And for women who had been abused earlier as adults, the likelihood of current abuse was fifteen times (15.11 odds ratio) what it was for women who had not been abused as adults. When we adjusted these ratios to take into account other important variables, the strong relationship between previous abuse and current abuse still held.

Help for Abused Women

The Region 4 Council on Domestic Violence seeks to reduce domestic violence in the area. They provide a crisis telephone hotline, a shelter for abused women and their families, and a number of outreach services. These services include phone counseling, follow-up services, support groups, a resource library, assistance with law enforcement, transportation, liaison with other agencies, and speakers for workshops in schools. Our survey included three questions about the familiarity that women have with the services offered by the council.

We found that knowledge of the council's services varied among the women we surveyed. More women were aware of the shelter for abused women (the crisis center) than of the crisis

phone line or the other outreach services offered by Region 4 (Figure 6). The proportion of women who knew about any of these services ranged between 40 and 60 percent.

To learn a little more about which women knew about the services, we performed a logistic regression analysis for each of the three types of services offered by Region 4 Council on Domestic Violence. The analysis produced a common set of characteristics that are associated with knowledge of all the services. The following relationships proved to be valid even after we adjusted the data for other important variables:

▶ Women who filled out the survey at WIC sites were more likely to know about the council's services than those at clinic sites.

▶ Older women knew about the services more often than younger women.

▶ Divorced women were more likely to know about the services than single, married, separated, or widowed women.

▶ Women with no husband or partner were less likely to know about the services than those with a husband or partner.

▶ Women who needed a vehicle to reach the survey site were less likely to know of the services.

The factors related to knowledge of the council's services were primarily the same for each service, but there were two notable exceptions. Higher income women were more likely to know about the crisis line and outreach services, though income level was not related to knowledge of the crisis center. Women who classified themselves as non-White were less likely to know of the crisis center, but race was not related to knowledge of the other two services.

Geographic location within the

Table 3.
Previous Abuse Related to Current Abuse

Characteristic	Number Abused	Percent Abused	Total Number	Odds Ratio (CI)
Abuse before 18				
Yes	236	41	569	5.90 (4.56, 7.63)
No	112	11	1044	*
Abuse as an adult				
Yes	284	48	596	15.11 (11.06, 20.64)
No	57	6	1003	*

Reference categories are denoted with an *. CI = Confidence Interval.

survey region was also a factor in the women's knowledge of services. The women who completed the survey at Fergus Falls Medical Group, Dakota Clinic in Becker County, and Grant County Medical Center were more likely to know about Region 4's services than our statistical models would suggest. But women at Broadway Medical Clinic in Douglas County were less likely to know about the services than our statistical models would suggest. We suspect that the existence of a local agency in Douglas County (the Listening Ear in Alexandria) contributes to the lack of knowledge of about the regional services in that area.

Implications for Practice

This study shows that rural women who seek health care are experiencing abuse just as often as urban women. The study provides the basis for changes both in the practice of rural health care providers and in the services of Region 4 Council on Domestic Violence. A number of changes have, in fact, already begun.

We found that rural women who are abused have demographic and other characteristics that cross socio-economic boundaries. This makes it difficult to identify abuse victims and reinforces the recommendations of the American Medical Association and others that health care providers should routinely screen women for abuse during preventive care visits, as well as during visits for treatment of illnesses and injuries.
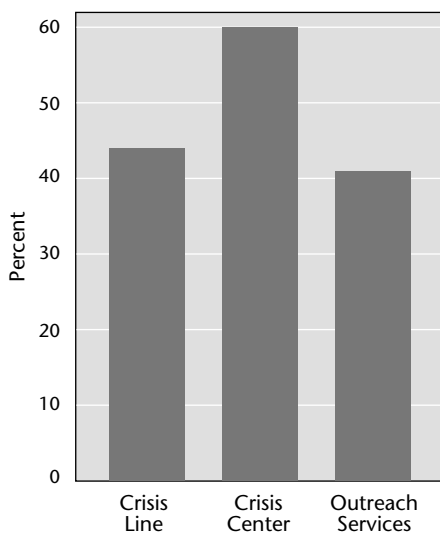
Figure 6. Knowledge of the Services Offered by Region 4 Council on Domestic Violence

We found that women who were previously abused are much more likely to be experiencing current abuse. This suggests that many opportunities exist not only for abuse screening but also for intervention throughout women's lives. It shows the need for information and presentations about abuse at high schools. It highlights the need for public health services for teens, so that intervention can take place early in their lives.

We found that low access to a telephone is an important risk factor for domestic violence. Health care providers in the region will be encouraged to provide access to telephones at health care sites. The Council on Domestic Violence is also expanding its cellular phone program for at-risk women. In addition, we found that lack of personal contacts is an important risk factor for domestic violence. The council plans to implement a community mentorship program, and pursue funding for increased home visits.

The Region 4 Council on Domestic Violence has used the results of this analysis to identify clinics and areas where knowledge of available services needs improvement. Sites where women knew less about the council's services have received brochures and other contact information that abused women may need. Each clinic site has been visited and informed of the survey results. They have been provided with guidance and contact materials. The practices of clinics and WIC sites where knowledge of the council's services are well known are being explored to see if they might be duplicated at other sites. In addition, a focus group session will be held in Traverse County to identify better ways to reach abused women there.

We found that women who were dependent on a vehicle to reach the survey site were less likely to know about the council's services. Advertising in free publications, posting fliers in stores, and other non-traditional advertising methods may help inform these women about the services. We also found that non-White women were less aware of council services. To address this, specific advertising campaigns are being designed for the non-White population pockets in west-central Minnesota.

This survey has suggested a number of ways in which intervention strategies for abused women can be improved and has pointed to ways in which the services available for abused women can

The level of abuse found among rural women is quite similar to levels reported among women in urban areas. Here an abused woman is going through an intake interview with a staff member at the Women's Crisis Center in Fergus Falls. The center offers shelter to abused women and their children.

be more widely known. Many important issues remain for further research. One example is the question, What prevents abused women from seeking help in isolated, rural areas? As answers to this and other questions emerge, rural health service providers will have the information to be more effective in their work with this serious social problem.

A written comment by one of the women we surveyed accurately communicates our hopes for this research: "I spent two years in a mentally and physically abusive marriage. The metro area I was in was very understanding of the situation. I'm really pleased to see something like this is being studied in a rural area and [to] help inform us of the strides made in the past few years regarding domestic violence."

■ Jon Anderson is an associate professor of mathematics at the University of Minnesota, Morris. His research interests include time-to-event data analysis, statistical methods in public health research, and studies of animal health. Marion Kershner is a public health nurse and clinical nurse specialist with Ottertail County Public Health in Fergus Falls, Minnesota. Dianne Long is director of the Region 4 Council on Domestic Violence. Gina Garding is an undergraduate student at the University of Minnesota, Morris who worked on the project with Professor Anderson.

1998 CURA Publications List and Order Form

HOUSING

☐ *Losing Ground: The Twin Cities Livable Communities Act and Affordable Housing.* Edward G. Goetz and Lori Mardock. 1998. CURA 98-2. 39 pp. Free.

HUMAN SERVICES

☐ *Redrawing the Family Circle: Concurrent Planning—Permanency for Young Children in High Risk Situations.* Esther Wattenberg, editor. 1998. Center for Advanced Studies in Child Welfare and CURA. CURA 98-1. 28 pp. Free.

POLICY AND GOVERNMENT

☐ *Growth Management in the Twin Cities Region: The Politics and Performance of the Metropolitan Council.* William C. Johnson. 1998. CURA 98-3. 112 pp. Free.

OTHER CURA PUBLICATIONS AND RESEARCH ARTICLES

☐ *The Complete List of CURA Publications.* 82 pp. Free.

☐ *The Complete List of CURA Reporter Articles.* 58 pp. Free.

☐ *CURA: Center for Urban and Regional Affairs.* 12 p. brochure. Free.

☐ *CURA Reporter,* Volume XXVIII, Number 1. February 1998. Free.

   "New Guidelines for Fighting Discrimination in Public Contracts," William L. Wilson, pp. 1-7.

   "The Tales We Tell: Folk Legends of Minnesota," S. Elizabeth Bird, pp. 8-12.

   "When Wild Rice is Cultivated," W. Daniel Svedarsky, Jay T. Huseby, Richard D. Crawford, pp. 13-17.

☐ *CURA Reporter,* Volume XXVIII, Number 2. April 1998. Special NPCR Issue. Free.

   "Bridging Two Worlds: Neighborhood Planning for Community Revitalization," Kris S. Nelson, pp. 1-5.

   "Pioneering Restorative Justice: A New Response to Urban Crime," Gena Gerard and Kris S. Nelson, pp. 6-11.

   "Pay Now or Pay More Later: St. Paul's Experience in Rehabilitating Vacant Housing," Edward G. Goetz, Kristin Cooper, Bret Thiele, and Hin Kin Lam, pp. 12-15.

   "Neighborhood Organizations on the Internet," Mark Brose, pp. 16-20.

   "Linking Neighborhoods with Academic Classrooms," Stephanie Otto, pp. 21-25.

   "Neighborhood Studies On-Line," pp. 26-27.

☐ *CURA Reporter,* Volume XXVIII, Number 3. September 1998. Free.

   "Redundant Farmsteads in Minnesota," John Fraser Hart and Lisa M. Rainey, pp. 1-6.

   "Characteristics of Poverty in Minnesota," Dennis A. Ahlburg, pp. 7-11.

   "Redefining the Metropolitan Region," John S. Adams and Barbara J. VanDrasek, pp. 13-18.

Please add my name to the mailing list to receive:

☐ *CURA Reporter.* Free.

Publications may also be ordered by phone (612/625-1551) or through our website: www.umn.edu/cura/pubsord.htm.

name _____

address _____

city _____ state _____ zip code _____

Send to: CURA
University of Minnesota
330 HHH Center
301 19th Avenue S.
Minneapolis, MN 55455

New CURA Publications

Growth Management in the Twin Cities Region: The Politics and Performance of the Metropolitan Council. William C. Johnson. 1998. CURA 98-3. 112 pp. Free.

The Metropolitan Council was created in 1967 to guide the growth of the Twin Cities metropolitan areas and assure that the necessary public facilities would be in place to serve it. This study examines the thirty-year record to learn what has been accomplished in the realms of land use and housing. It reports that the system's achievement has been impressive in the national context although not meeting the expectations of all observers. Further, the author finds that the Metropolitan Council operates in the midst of a web of political influence that both supports many of its current efforts and restrains them. William C. Johnson is a professor of political science at Bethel College and a member of the Planning and Zoning Board of the city of Lino Lakes. He co-authored (with John Harrigan) *Governing the Twin Cities Region in 1978*, the first book-length study of the Metropolitan Council. He is also the author of *Public Administration: Politics, Policy and Practice* and *Urban Planning and Politics.*

Losing Ground: The Twin Cities Livable Communities Act and Affordable Housing. Edward G. Goetz and Lori Mardock. 1998. CURA 98-2. 39 pp. Free.

The Livable Communities Act (LCA) was enacted by the Minnesota Legislature in 1995 in part to expand housing opportunities for low- and moderate-income families. About 125,000 low-income families in the Twin Cities are paying more than 30 percent of their income for housing and the need for affordable dwellings is likely to increase in the near future. An analysis of how LCA is being implemented, however, shows that by fulfilling the goals set in participating communities, the proportion of housing stock that is affordable will actually be reduced under the LCA program. A number of recommendations are suggested that could reverse these results, including revised definitions of affordability, new goals, incentives, and statewide zoning laws. An article presenting the results of this study will appear in the next CURA Reporter. Edward G. Goetz is an associate professor in the Housing Program at the University of Minnesota, visiting professor and interim head of the Planning Program in the Humphrey Institute, and director of CURA's Housing Initiatives. Lori Mardock is a graduate student in housing at the University of Minnesota.

CURA REPORTER

CURA
University of Minnesota
330 HHH Center
301 19th Avenue S.
Minneapolis, MN 55455

ADDRESS SERVICE REQUESTED