The Relationship between Social Support, Stress, and Health among Women on Detroit’s East Side
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A conceptual model of the stress process has been useful in examining relationships between numerous social determinants (e.g., chronic stress), protective factors (e.g., social support), and health status. In this article, the authors examine multiple sources of chronic stress, instrumental and emotional support, and health outcomes among a random sample ($N = 679$) of predominantly low-income African American women who reside on Detroit’s east side. The findings suggest that a number of chronic stressors have an impact on depressive symptoms and general health and that even though instrumental and emotional support each have a significant effect over and above the effects of the stressors, when both are included in the model, instrumental support, and not emotional support, remains as a significant predictor of health outcomes. These findings suggest the need for health education interventions and policy strategies that strengthen social support and aim at macro-level changes necessary to reduce chronic stressful conditions.

There is increasing emphasis in the literature on social determinants of health and the need to gain a better understanding of the multiple structural, psychosocial, cultural, and biological factors that have an impact on health status.¹⁴ A conceptual model of the stress process is one framework that has been useful in examining the relationship between these numerous determinants of health status.²⁻⁴ This model posits that environmental and psychosocial stressors are associated with both short-term and long-term physiological,
psychological, and behavioral responses and outcomes and that a number of conditioning factors influence the relationships between the variables in the stress process.6-8 Social support has been frequently examined as a conditioning variable in the relationship between stress and health.7,8-13

The concepts of stress and social support have been defined and measured in a number of different ways,7,14,15 with varying associations to mental and physical health.7,9,12,13 Stress has been most frequently operationalized as major life events, discrete events that disrupt normal activities and often require some type of adaptive response, for example, death of a loved one, marriage.7,16,17 Chronic stressors are problems, challenges, and difficulties that people experience during extended periods of time in their daily lives, such as poverty, long-term unemployment, racism, and ongoing work overload.7,18 Social support is generally defined as the functional content of interpersonal relationships.6 The two types of support that have been examined the most within the context of the stress process are emotional support (the provision of love, empathy, caring, and trust) and instrumental support (the provision of tangible assistance and services that directly help a person in need).6

There is extensive empirical evidence that social support has a direct, positive relationship with physical and mental health and a direct, negative relationship with depression.7,9,10,12-14,19 There is considerable, albeit somewhat conflicting, evidence that social support has a buffering effect that protects people from the adverse consequences of stress.7,9,10,12-14,20 In addition, although emotional and instrumental support are differentiated conceptually, they have not always been found to be empirically independent.7,9,15 The nature of these relationships is even less well understood within the context of historically marginalized communities in which the experience of chronic stressors are particularly salient.14,21,22

Studies that examine chronic stressors, multiple health outcomes, and the role of both instrumental and emotional support within communities that have fewer economic resources, especially communities of color, are important if we are to conduct interventions that are appropriately tailored to these contexts.14,19,21,23 In this article, we examine multiple sources of chronic stress, instrumental and emotional support, and depressive symptoms and general health among a population of predominantly low-income, African American women who reside on Detroit’s east side. We discuss implications of our results for health educators designing and implementing interventions within economically marginalized urban communities.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Demographic Factors and Health

There is considerable evidence that physical health status declines as age increases.24 Studies examining the relationship between age and mental health, particularly depression, have found conflicting evidence.14,25 Although prior research has found relationships between educational status and health outcomes, such that as education increases, physical health improves and symptoms of depression decrease, the effects differ depending on other social factors (such as race and ethnicity).2,5,26 Being married has frequently been used as a proxy for social support, and numerous research findings have found that being married is positively related to physical and mental health status, especially for men.9,12,14 An extensive body of literature has found that lower socioeconomic status is
associated with poorer health status and that this relationship accounts for much of the
differential between the health of White Americans and African Americans.2-4,27 In addi-
tion, residents of urban communities that have experienced economic disinvestments,
particularly African Americans, have also been found to experience greater burden of
morbidity and mortality.28-32

Chronic Stress, Social Status, and Health

Between 1985 and 1995, more than 3,000 articles on “stress and health” were pub-
lished in sociological and psychological journals.14 Research evidence suggests that
chronic stressors (e.g., worries about physical safety, distrust of the police) are associated
inversely with social status and that members of marginalized groups have a greater like-
lihood of experiencing chronic stressors compared with members of more privileged
groups.3,14,33-35 Researchers have found that such stressors are associated with all-cause
mortality rates36 and morbidity and mortality from a number of causes, including hyper-
tension and homicide.31,37-39 In addition to the long-standing association between income
and health status (mentioned above), financial vulnerability or being worried about not
having enough money to meet basic needs has been found to have a negative impact on
health status.40 Chronic stress associated with family demands and responsibilities has
been reported to be associated with poorer health.41,42 It has been argued14,23 that the inful-
ence of stress on health has been greatly underestimated because most studies have only
examined one health outcome at a time (e.g., depression, general health).

Social Support and Health

During the past 20 years, prospective epidemiological studies have consistently found
direct relationship between a lack of social ties and all-cause mortality,6-12 and a number
of studies have found that emotionally supportive ties have an impact on survival among
people with cardiovascular diseases and postmyocardial infarction.12 There is consid-
erable evidence that lack of social support is associated with psychiatric impairment, such
as depressive symptoms.43-44 Emotional support has been found to be the most strongly
and consistently related to health.9,11,15 However, studies also suggest that instrumental
support may help meet material needs, such as financial needs and child care.45 Instru-
mental support has been found to be negatively and independently associated with
depression and negative morale46 and with hypertension47 and blood pressure19 among
African American respondents. Although numerous studies have found that social sup-
port moderates the relationship between stress and health, the evidence for buffering
effects is not conclusive.9,11,17,48

Conceptual Framework and Hypotheses

Questions remain regarding the direct and stress-buffering effects of emotional and
instrumental support on mental and physical health in communities that experience high
levels and multiple types of chronic stress. The purpose of this study is to investigate some
of these questions. The conceptual framework guiding this study is adapted from the
stress model described above and is presented in Figure 1. Direct and indirect effects of
both emotional and instrumental support on self-reported general health and depressive
symptoms will be examined among residents who are experiencing varying levels of
chronic stress (i.e., worries about safety, physical environment, police, family, and financial matters). The present study examines the effects of stress, social support, and health over and above the effects of age, income, education, and marital status. The study hypotheses that will be tested are presented below.

**Hypothesis 1:** Chronic stress will have a direct, negative association with general health and a positive association with depressive symptoms, controlling for the effects of demographic factors.

**Hypothesis 2:** Both emotional and instrumental support, independently and together, will have direct, positive effects on general health and negative effects on depressive symptoms, controlling for the effects of demographic factors and chronic stress.

**Hypothesis 3:** Both emotional and instrumental support independently will have a modifying effect on the chronic stress–health relationship, such that adverse effects of chronic stress will be less among those individuals with high social support.

**METHOD**

**Data Collection**

The data for this study were collected in the summer of 1996 through a random sample survey conducted as part of the East Side Village Health Worker Partnership (ESVHWP). The partnership is a community-based participatory research effort that involves a lay health adviser model to examine and address the social determinants of health on the east side of Detroit. The ESVHWP is a project of the Centers for Disease Control and Prevention (CDC)-funded Detroit Community—Academic Urban Research Center and includes more than 40 community residents as Village Health Workers and a steering committee composed of representatives from community-based organizations, health service agencies, and academia (see Authors’ Note for list of organizations involved). In accordance with the community-based participatory research principles adopted by the partnership, the steering committee has guided all aspects of the research and intervention. Of particular importance to the present study, the steering committee, through a series of group discussions and in-depth interviews, was instrumental in the development of the conceptual framework of stress and health, in the identification of key variables to examine, and in the selection and wording of measures included in the survey instrument.

The eligibility criteria for the survey were women aged 18 and older living in a geographically defined area on the east side of Detroit who care for children younger than 18 years of age for at least 5 hours a week. The intervention area for the ESVHWP is bounded by four major streets, and households were randomly selected from a listing of all households in this area. If more than one woman in a selected household met the eligibility criteria, respondents were randomly selected using a Kish election table. Interviews were conducted by neighborhood residents who were trained by staff from the University of Michigan School of Public Health. A total of 700 women were interviewed. The response rate for this survey was 81%. Of the 700 women interviewed, 97% (N = 679) were African American. The analyses reported in this article include only the African American respondents.
Measurement of Variables

Independent Variables

Demographic Variables. The demographic variables included in this study were age, income, education, and marital or partner status. Age was measured in years and collapsed into six categories (18-24, 25-34, 35-44, 45-54, 55-64, and 65 and older). In the analyses presented here, age was treated as a dummy variable, with age 18-24 as the omitted category. Income was measured as the total family income in the past year before taxes. In the analyses presented here, income was collapsed into two categories: less than $10,000 per year and $10,000 or more per year. Years of education were collapsed into the following categories: less than high school, completion of a general equivalency diploma (GED) or high school, some college education, and graduation from college. The five categories of marital or partner status included married, live with partner, separated or divorced, widowed, and never married. In the analyses, marital status was treated as a dummy variable, with “married” as the omitted category.

Chronic Stress Variables. The five chronic stress scales used in this study were family stress, financial vulnerability, physical environmental stress, police stress, and safety stress. Respondents answered using a 5-point Likert-type scale: 1 = never, 5 = almost all the time (a complete listing of scale items is available from the first author). The family stress scale contained four items that assessed the degree of stress related to family demands and problems with children (α = .63). Financial vulnerability included five items that assessed whether the respondent worried, for example, about having enough money to pay for health care or to purchase food (α = .78). Stress related to the physical environ-
ment included four items and measured the respondent’s concern about such stressors as dumping in vacant lots and heavy traffic ($\alpha = .72$). The police stress scale was based on three items that assessed respondent’s concern with police performance and lack of trust in the police ($\alpha = .84$). Finally, safety stress (seven items) measured whether the respondent worried about personal safety and her children’s safety in the home and neighborhood ($\alpha = .83$). For questions relating to children, respondents answered for those children they cared for at least 5 hours a week.

**Social Support Variables.** Emotional and instrumental support were measured using scales adapted from Cohen and Wills and James and colleagues. Respondents answered using a 4-point Likert-type scale: 1 = never, 4 = always. Emotional support was assessed using three items ($\alpha = .84$) that measured how often the respondent reported that she had someone to turn to for advice and to share private worries, for example, “When you have problems, how often would there be somebody you could trust to help you solve them?” Instrumental support, a six-item scale ($\alpha = .86$), measured how often the respondent had someone who could help with such tangible things as transportation, money, and child care, for example, “If you couldn’t use your car or your usual way of getting around for a week, how often could you find somebody who would take you wherever you needed to go?”

**Dependent Variables**

**Depressive Symptoms.** Depressive symptoms were measured using the Center for Epidemiologic Studies–Depression (CES-D) Scale. The CES-D Scale is created by summing the scores of the 11 component items and dividing by 11. Scale items assessed how often in the past week (1 = hardly ever, 2 = some of the time, 3 = most of the time) respondents experienced feelings that are symptomatic of depression, for example, sadness or loneliness. Cronbach’s alpha ($\alpha$) for these 11 items was .83.

**General Health.** General health status was assessed using a single-item self-report measure that asks respondents whether their health is excellent, very good, good, fair, or poor. This item has been a reliable indicator of future mortality at the population level.

**Data Analysis**

Analyses of the survey data occurred in several stages. The first set of analyses tested the independent variables as continuous measures to determine the effects of support and stress on self-reported general health and depressive symptoms. The results of these analyses yielded very few statistically significant results (not presented here).

In the next analysis stage, the continuous measures were collapsed into categorical variables to test for threshold effects. For example, the variables instrumental and emotional support (range 1–4) were recoded into three new categories of low, medium, and high support. The categories were created from frequency distributions, producing roughly equal ns in each of the three categories. For the chronic stress variables, low, medium, and high categories were created based on clusters of similar responses. Drawing on prior research, a dichotomous variable was created for income level (less than or more than $10,000). The health outcome variables were then regressed on the independent categorical variables.
A series of five regression models was used to examine the relationships between the demographic variables, chronic stress, and instrumental and emotional social support, with the two outcome measures, depressive symptoms and general health. Model 1 is an examination of the relationship of the demographic variables of age, education, income, and marital or partner status to depressive symptoms and general health. Given that the role of these demographic factors is not a major focus of this study, they are included as control variables, and specific results are not presented here (available from the first author). Model 2 included the demographic variables and added the five chronic stress variables (family, financial vulnerability, physical environment, police, and safety). Model 3 included the demographic variables, the five chronic stress variables, and added instrumental support. Model 4 included the demographic variables, the five chronic stress variables, and added emotional support. Model 5 is an examination of the demographic variables, the five chronic stress variables, and both instrumental and emotional support. Thus, in Model 2, the effects of chronic stress were estimated net of the demographic variables, and in Models 3 and 4, the effects of instrumental and emotional support were estimated net of chronic stress and the demographic variables, respectively. Last, Model 5 examined the effects of both instrumental and emotional support, net of chronic stress and the demographic variables. Analyses were also conducted to test for interactions between the stress and support variables. In addition, the assumption of normal distribution for the variables included in the multiple regression analyses were examined using a histogram of residuals. Based on those distributions and the large sample size for this study, which reduces the importance of the normality assumption, the variables were deemed appropriate for use in multiple regression analyses.

RESULTS

Description of Overall Sample

Descriptive data for the 679 women included in these analyses are summarized in Table 1. The average age was 39 years, with a range of 18 to 90 (SD = 15.66), and 40.5% of respondents reported that they were never married, 20.9% were currently married, and 17.7% were separated or divorced. Respondents had an average education of slightly higher than high school graduation or GED, with a range of 3 years to 17 years of education (M = 12.13, SD = 2.10). The respondents’ average income for the previous year, including all sources of income, was between $15,000 and $19,999. Respondents reported a mean of 3.29 on general health (1 = poor, 5 = excellent; SD = 1.04) and a mean of 1.50 for depressive symptoms (1 = symptoms hardly ever, 3 = symptoms most of the time; SD = 0.39). (The frequency distribution and information on kurtosis and skewness are available from the first author.)

Association of Demographic Variables, Chronic Stress, and Social Support With Depressive Symptoms

Chronic Stress and Depressive Symptoms

As presented in Table 2, Model 2, high levels of family stress as compared with low levels, both medium and high levels of financial vulnerability as compared with low levels, high levels of police stress as compared with low levels, and medium but not high lev-
els of safety stress all had a significant direct effect on depressive symptoms. When the chronic stress variables were included in Model 2, the variance explained in depressive symptoms increased from 5.8% (demographic variables only) to 20.5%. Examining the $B$ coefficients in the models indicates the relative importance of the individual variables within each model and the changes in their relative importance as variables are added in subsequent models. For the most part, the overall significant effects of the chronic stress variables on depressive symptoms did not change across the five models in Table 2 (the exceptions being a decrease in significance levels for high financial vulnerability from Model 2 to Models 3, 4, and 5 and a decrease in significance level for high police stress in Model 5). However, the levels of the $B$ coefficients for these stress variables decreased as the social support variables were added to the models (e.g., the standardized coefficient for the medium level of financial vulnerability decreases from .209 in Model 2 to .178 in Model 3 when instrumental support was included in the model).

**Social Support and Depressive Symptoms**

As presented in Table 2, Model 3, both medium and high levels of instrumental support were significant at $p \leq .01$ and $p \leq .001$, respectively. These results indicated that instrumental support was a significant predictor of depressive symptoms over and above the impact of chronic stress (i.e., the more instrumental support, the fewer depressive symptoms). The total amount of variance explained by this model was 21.7%. In Model 4, instrumental support was removed from the model and replaced with emotional support. Results from Model 4 indicated that emotional support, like instrumental support, significantly predicted depressive symptoms ($p \leq .01$) over and above the impact of chronic stress. The total amount of variance explained is 21.3%. When both instrumental and emotional support were included in Model 5, emotional support was no longer significant, and instrumental support at medium levels was not significant. Instrumental support

### Table 1. Range, Means, Standard Deviations, and Internal Reliabilities for Major Variables

<table>
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<tr>
<th>Variable</th>
<th>Range</th>
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Table 2. Depressive Symptoms Regressed on Demographic Variables, Stress, Instrumental Support and Stress, Emotional Support and Stress, and Instrumental and Emotional Support and Stress (n = 631 to 632)

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<th>Model 2</th>
<th>Model 3</th>
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<td>(.041)</td>
<td>(.041)</td>
<td>(.041)</td>
</tr>
<tr>
<td></td>
<td>–.122 (\text{SE} = .037)</td>
<td>–.150*** (\text{SE} = .037)</td>
<td>–.103 (\text{SE} = .050)</td>
<td>–.127* (\text{SE} = .050)</td>
<td>–.103 (\text{SE} = .050)</td>
</tr>
<tr>
<td></td>
<td>(.037)</td>
<td>(.037)</td>
<td>(.050)</td>
<td>(.050)</td>
<td>(.050)</td>
</tr>
</tbody>
</table>

Total adjusted $R^2$: .058 .205 .217 .213 .216  
Change adjusted $R^2$: \(F\) change\textsuperscript{\textcircled{m}}: 4.215*** 12.450*** 5.875** 4.049* 3.162**

NOTE: \(b = \) unstandardized beta coefficient; $B^{\text{\textsuperscript{\circled{\text{std}}}}} = \) standardized beta coefficient.

a. Age (using age 18-24 as referent group) is not a significant predictor in any of the models.
b. Education (using less than high school degree as referent group) is a significant predictor across all five models (\(p \leq .05-.01\)).
c. Income is a significant predictor only in Model 1 (\(p \leq .01\)).
d. Marital status (using married as referent group): Only live with partner is a significant predictor and across all five models (\(p \leq .001\)).
e. (referent) low family stress.
f. (referent) low financial vulnerability.
g. (referent) low physical environment stress.
h. (referent) low police stress.
i. (referent) low safety stress.
j. (referent) low instrumental support.
k. (referent) low emotional support.
l. (referent) Model 2 for Models 3, 4, 5.
m. (referent) Model 2 for Models 3, 4, 5.

\[*p \leq .05. \] **\(p \leq .01. \] ***\(p \leq .001. \]
at high levels was a significant predictor \( (p \leq .05) \) of depressive symptoms net of the impact of chronic stress. The total amount of variance explained was 21.6\%. The level of the \( B \) coefficient for high instrumental support decreased from \(-.150\), when only instrumental support was in the analyses (Model 3), to \(-.127\) when both instrumental and emotional support were in the analyses (Model 5). Results from these models suggest that emotional support by itself was important in predicting depressive symptoms, over and above chronic stress, but that when both emotional and instrumental support were included in the analysis, instrumental support was a stronger predictor. Furthermore, Model 5, with both instrumental and emotional support in the model, accounts for only slightly more variance in symptoms of depression than does Model 3, with instrumental support alone. The analyses of the interaction effects between each of the types of social support and each of the stress variables did not result in more statistically significant interactions than would be expected by chance (results not shown).

**Association of Demographic Variables, Chronic Stress, and Social Support With General Health**

**Chronic Stress and General Health**

As presented in Table 3, Model 2, both medium and high levels of family stress as compared with low levels, both medium and high levels of financial vulnerability as compared with low levels, and medium but not high levels as compared with low levels of physical environmental stress and safety stress all had a significant direct negative effect on self-reported general health. When the chronic stress variables were included in Model 2, the variance explained in general health increased from 13.8\% (demographic variables only) to 19.5\%. The overall significant effects of medium and high levels of family stress on general health did not change across the five models. However, although the effect of medium level of financial vulnerability on general health (Model 2, \( p \leq .05 \)) remained significant when emotional support was added to the analyses (Model 4, \( p \leq .05 \)), the effects of this chronic stress were no longer significant when instrumental support (Model 3) and both instrumental and emotional support (Model 5) were included. The effects of high level of financial vulnerability on general health remained significant across the models, but the relative importance of this stress variable was reduced in models that included emotional and instrumental support (Model 2, \( p \leq .01 \); Models 3, 4, and 5, \( p \leq .05 \)). The overall significant effect of medium level of physical environmental stress on general health remained the same when instrumental support (Model 3, \( p \leq .05 \)) and emotional support (Model 4, \( p \leq .05 \)) were added separately, but this effect was no longer significant when both instrumental and emotional support were included (Model 5, \( p = .064 \)). The effects of medium level of safety stress on general health remained significant for all models \( (p \leq .05) \), except when instrumental support alone was included (Model 3, \( p = .066 \)).

**Social Support and General Health**

As presented in Table 3, Model 3, a high level of instrumental support significantly predicted general health \( (p \leq .01) \), over and above the impact of chronic stress (i.e., the more instrumental support, the better general health). The total amount of variance explained was 20.4\%. A medium level of instrumental support did not predict general
health over and above the impact of chronic stress. As shown in Model 4 of Table 3, a medium level of emotional support significantly predicted general health \( (p \leq .05) \), net of chronic stress, whereas a high level of emotional support did not significantly predict general health. The total amount of variance explained was 19.8%. Examining Model 5, which included both emotional and instrumental support, the only significant predictor of general health over and above the impact of chronic stress was a high level of instrumental support \( (p \leq .01) \). The total amount of variance explained was 20.5%. The level of the \( B \) coefficient for high instrumental support increased from .134 when only instrumental support was in the analyses (Model 3) to .162 when both instrumental and emotional support were in the analyses (Model 5). Results from these models suggest that a medium level of emotional support by itself was important in predicting general health, over and above chronic stress, but that when both emotional and instrumental support were included in the analysis, instrumental support was a stronger predictor. The analyses of interaction effects between the chronic stress variables and emotional and instrumental support did not result in more statistically significant interactions than would be expected by chance (results not shown).

**DISCUSSION**

The first hypothesis posited a positive relationship between chronic stress and depressive symptoms, controlling for the effects of demographic factors. The overall results showing deleterious effects of chronic stress on physical and mental health are consistent with research on the stress process, specifically regarding chronic stress. \(^7,17,31,33,34,39,58\) The differences in effect sizes of the various chronic stress variables, as well as across dependent variables, suggest that different stressors may affect women in this community in diverse ways. For example, given the concentrated poverty and the high number of female-headed households in this community, day-to-day worries about financial matters and having enough money to meet basic needs, as well as problems with children and family health, may be more salient for these women than other chronic stress variables, such as worries about the physical environment. These results point to the need to continue to examine the effects of a variety of distinct chronic stressful conditions on different health outcomes and among women in different community contexts. \(^14,23,59\) The finding that medium but not high levels of the physical environment and safety stressors are associated with poorer general health deserves further exploration, including the use of qualitative methods to try to gain a better understanding of the role and meaning of these stressors in women’s lives.

The second hypothesis posited that instrumental and emotional support, both independently and together, would have a direct effect on general health and depressive symptoms, over and above the effects of the demographic and chronic stress variables. The results are consistent with much of the previous research that has found associations between instrumental and emotional support and physical and mental health status. \(^9,10,12,19,46,47\) The finding that instrumental support, rather than emotional support, was the stronger predictor of depressive symptoms and general health when both variables were examined simultaneously is somewhat inconsistent with previous research that has found emotional support to be the most strongly related to health. \(^9,11,15\) However, there is some prior evidence that instrumental support is a more significant predictor within areas of concentrated poverty and communities of color. \(^19,46\) The present study involved African
Table 3. General Health Regressed on Demographic Variables, Stress, Instrumental Support and Stress, Emotional Support and Stress, and Instrumental and Emotional Support and Stress ($n = 631$ to $632$)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic Variables</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Agea</td>
<td>-.285</td>
<td>-.110**</td>
<td>-.290</td>
<td>-.112**</td>
<td>-.294</td>
</tr>
<tr>
<td>Incomeb</td>
<td>(.099)</td>
<td>(.098)</td>
<td>(.099)</td>
<td>(.098)</td>
<td>(.099)</td>
</tr>
<tr>
<td>Marital statusd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium family stress e</td>
<td>-.395</td>
<td>-.092*</td>
<td>-.389</td>
<td>-.091*</td>
<td>-.413</td>
</tr>
<tr>
<td>High family stress e</td>
<td>(.168)</td>
<td>(.167)</td>
<td>(.168)</td>
<td>(.167)</td>
<td>(.167)</td>
</tr>
<tr>
<td>Medium financial vulnerability f</td>
<td>-.242</td>
<td>-.089*</td>
<td>-.179</td>
<td>-.066</td>
<td>-.212</td>
</tr>
<tr>
<td>High financial vulnerability f</td>
<td>(.106)</td>
<td>(.109)</td>
<td>(.108)</td>
<td>(.109)</td>
<td>(.109)</td>
</tr>
<tr>
<td>Medium physical environment stress g</td>
<td>-.193</td>
<td>-.082*</td>
<td>-.190</td>
<td>-.081*</td>
<td>-.188</td>
</tr>
<tr>
<td>High physical environment stress g</td>
<td>(.093)</td>
<td>(.093)</td>
<td>(.093)</td>
<td>(.093)</td>
<td>(.093)</td>
</tr>
<tr>
<td>Medium police stressh</td>
<td>.108</td>
<td>.024</td>
<td>.131</td>
<td>.030</td>
<td>.129</td>
</tr>
<tr>
<td>High police stressh</td>
<td>(.178)</td>
<td>(.177)</td>
<td>(.178)</td>
<td>(.177)</td>
<td>(.177)</td>
</tr>
</tbody>
</table>

Note: SE = Standard Error; $b$ = Unstandardized Coefficient; $B^{ig}$ = Standardized Coefficient

** $p < .01$; * $p < .05$
<table>
<thead>
<tr>
<th>Medium safety stress</th>
<th>−.193</th>
<th>−.076*</th>
<th>−.176</th>
<th>−.070</th>
<th>−.189</th>
<th>−.075*</th>
<th>−.186</th>
<th>−.073*</th>
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<tbody>
<tr>
<td></td>
<td>(.097)</td>
<td>(.096)</td>
<td>(.096)</td>
<td>(.096)</td>
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<tr>
<td>High safety stress</td>
<td>.118</td>
<td>.036</td>
<td>.122</td>
<td>.037</td>
<td>.123</td>
<td>.038</td>
<td>.107</td>
<td>.033</td>
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<tr>
<td></td>
<td>(.138)</td>
<td>(.138)</td>
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<td>(.138)</td>
<td>(.138)</td>
<td>(.138)</td>
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<td>(.138)</td>
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<tr>
<td>Medium instrumental support</td>
<td>.121</td>
<td>.055</td>
<td>.112</td>
<td>.051</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.095)</td>
<td>(.112)</td>
<td>(.112)</td>
<td>(.112)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>High instrumental support</td>
<td>.298</td>
<td>.134**</td>
<td>.361</td>
<td>.162**</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(.103)</td>
<td>(.138)</td>
<td>(.138)</td>
<td>(.138)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Med emotional support</td>
<td>.189</td>
<td>.084*</td>
<td>.074</td>
<td>.034</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>(.094)</td>
<td>(.111)</td>
<td>(.111)</td>
<td>(.111)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>High emotional support</td>
<td>.128</td>
<td>.055</td>
<td>−.113</td>
<td>−.049</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.105)</td>
<td>(.139)</td>
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<td>(.139)</td>
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</tbody>
</table>

| Total adjusted $R^2$ | .138 | .195 | .204 | .198 | .205 |
| Change adjusted $R^2$ | .057 | .009 | .005 | .015 |
| $F$ change | 9.444*** | 5.371*** | 4.270** | 2.050 | 2.962* |

NOTE: $b =$ unstandardized beta coefficient; $B^{\text{st}} =$ standardized beta coefficient.

a. Age (using age 18-24 as referent group) with the exception of age-group 25-34 is a significant predictor across all five models ($p \leq .01-.001$).
b. Education (using less than high school degree as referent group): Some college and college graduate are a significant predictor across all five models ($p \leq .05$).
c. Income is a significant predictor across all five models ($p \leq .05-.01$).
d. Marital status (using married as referent group): Only separated or divorced is a significant predictor and only in Model 1 ($p \leq .05$).
e. (referent) low family stress.
f. (referent) low financial vulnerability.
g. (referent) low physical environment stress.
h. (referent) low police stress.
i. (referent) low safety stress.
j. (referent) low instrumental support.
k. (referent) low emotional support.
l. (referent) Model 2 for Models 3, 4, 5.
m. (referent) Model 2 for Models 3, 4, 5.
American women, a large percentage of whom live below the poverty level, who reside in a community that has experienced considerable economic disinvestment during the past several decades, and for whom financial vulnerability is a major chronic stress. It therefore seems reasonable that the tangible supports provided by family and friends (such as child care, transportation, money) might be particularly strongly associated with general health and depressive symptoms.

These findings suggest that instrumental and emotional support may reflect two conceptually distinct dimensions. It has been suggested elsewhere that the same individuals may provide instrumental and emotional support. Although it is not possible to examine that proposal empirically with these data, the relatively high correlation between instrumental and emotional social support in this study (.63) does suggest that those with access to one type of support are likely to have access to the other. The independent effect of emotional social support was masked in this study when instrumental support was included in the model. One potential interpretation of this finding is that for women raising children under conditions of economic strain, the ability to rely on instrumental support provides some protection against the potential negative effects of stress. These results point to the value of examining both emotional and instrumental support, as well as the particular chronic stressors experienced in a given context, to understand their implications for both physical and mental health. Examining social support within a broader social network context would also contribute to a better understanding of the different structures (e.g., size, density) and functions of social networks, particularly within diverse cultures and social class variations.

The third hypothesis predicted that emotional and instrumental support would each modify the relationship between chronic stress and health. Contrary to what was expected, no significant stress-buffering effects of social support were found in these analyses. However, it is important to note that prior evidence for buffering effects of social support has been inconclusive and that different measures of social support or different analysis strategies might have resulted in different findings.

**IMPLICATIONS FOR PRACTICE**

It is important to acknowledge that this study involved African American women residing in a racially segregated community of concentrated poverty. This context is important both for understanding the implications of these findings for women in this community and their potential generalizability and relevance to practice for African American women in similar circumstances elsewhere in the United States.

The findings of this study suggest that a number of chronic stressors have an impact on depressive symptoms and general health and that instrumental and emotional support have significant effects over and above the effects of the stressors. Therefore, health education interventions and policies need to focus on both reducing stressors and strengthening social support. Furthermore, the finding that instrumental support is more strongly associated with the outcomes examined suggests the need to emphasize the provision of tangible aid and services in interventions to promote health in low-income communities.

One typology of social network and social support interventions suggests four categories of interventions, enhancing existing social network linkages, developing new social network linkages, enhancing networks through the involvement of indigenous nat-
ural helpers, and enhancing networks at the community level through participatory problem-solving processes. The results presented here suggest that enhancing the provision of both emotional and instrumental support is appropriate across all types of interventions. For example, with existing network ties, an intervention focused on management of diabetes might instruct family members in both how to help prepare healthy meals (i.e., instrumental support) and how to show empathy and concern (i.e., emotional support). Establishing a support group for persons with diabetes is an example of developing new network linkages, and such groups can focus on the provision of instrumental aid (e.g., sharing transportation to the grocery store to buy healthy foods) and emotional support (e.g., listening to and helping problem solve around the barriers and challenges to following prescribed regimens). Natural helpers are people in the community to whom others turn for advice, support, and other types of assistance.62 Continuing with the example of diabetes management, programs developed to provide training for natural helpers could place particular emphasis on strategies to provide instrumental support to, for example, assist community efforts to improve access to safe places to exercise.

Although instrumental and emotional support both had significant effects on the health outcomes examined here, the negative impact of chronic stress on health remained. We have argued elsewhere that these stressors are related to structural conditions associated with processes of economic disinvestment on Detroit’s east side61 and that those social conditions affect the very social networks that provide the social support examined in this article.21 Interventions that strengthen and mobilize networks at the community level through participatory problem-solving strategies are one such strategy. Although the provision of instrumental support at the interpersonal level has the potential to benefit the participants involved, broader scale community and social changes that are aimed at altering the very structures that have an impact on health and well-being are critical if we are to improve the health of residents within racially segregated communities and communities of concentrated poverty. These include efforts to increase economic investment in urban communities; to increase the wealth of residents through, for example, the development of locally owned businesses; to improve local access to high-quality and affordable foods; and to improve the walkability of urban neighborhoods through safety initiatives.

**CONCLUSIONS**

The results of this study suggest the application of a conceptual framework of stress for understanding social determinants of health in an urban community. This general conceptual framework, applied to the community context of Detroit’s east side, afforded a mechanism to understand the complex relationships between the multiple stressors that women face and the nature of the resources available to them to address these stressors. This study has affirmed the importance of emotional and instrumental support as health enhancing, with a particular emphasis on the role of instrumental support within this context. These results also point to the significant implications of chronic stress for women’s health. They reinforce the importance of health education strategies that not only strengthen social support but also interventions and policies aimed at macro-level changes necessary to reduce the chronic stressful conditions that contribute to the health disparities that exist in predominantly low-income communities of color.
References


