

A social support and social strain measure for minority adolescent mothers: a confirmatory factor analytic study

C. B. Gee* and J. E. Rhodes†

*Department of Psychology, The George Washington University, Washington, DC, and

†Department of Psychology, University of Massachusetts, Boston, MA, USA

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Abstract

Purpose The purpose of this study is to examine the validity and structure of the Social Support Network Questionnaire (SSNQ), an interview for identifying the positive and negative aspects of individuals' social networks.

Methods The sample consisted of 536 pregnant and parenting, African-American and Latina adolescents. Participants were recruited from an alternative school for pregnant and parenting adolescents in a large Midwestern city.

Results Confirmatory Factor Analyses revealed the presence of three factors: perceived availability, satisfaction and social strain. All three factors demonstrated adequate internal consistency. Perceived availability and social strain were uncorrelated, implying that they are distinct dimensions. Social strain was the most consistent predictor of psychological well-being. Further, strain in relationships with the young women's male partners added unique variance to the prediction of both anxiety and depression.

Conclusions The results of this study suggest that the SSNQ may be a useful tool in assessing both positive and negative aspects of pregnant and parenting adolescent mothers' social support networks.

Keywords

adolescent parents,
pregnant adolescents,
social strain, social
support

Correspondence:

Christina B. Gee, PhD,
Department of
Psychology, The George
Washington University,
2125 G St., NW,
Washington, DC 20052,
USA
E-mail: cgee@gwu.edu

Research has consistently found that social support is correlated with better post-partum adjustment for adolescent mothers (Cutrona 1984; Thompson 1986; Unger & Wandersman 1988; Turner *et al.* 1990). However, the lack of a consistent unifying definition has hindered the development of a theory outlining the precise mechanisms by which social support may affect low-income, minority adolescent mothers' well-being. Further, most studies use measures of social support developed and validated on middle-class adolescent and adult populations, thus limiting their applicability to minority populations experiencing unique levels and combinations of stressors. Specifically, few social support instruments have been developed on

pregnant and parenting minority adolescents, a group experiencing high levels of stress related to the early transition to parenthood, minority status and economic strain. The importance of developing social support assessment instruments that are valid for minority populations, including pregnant and parenting minority adolescents, has been recognized by some researchers (Cameron *et al.* 1996; Coffman & Ray 1999; Sagrestano *et al.* 1999), but most are still developed on college samples.

Social support researchers have taken various theoretical and measurement approaches to examining the construct of social support. For example, some studies have employed measures

that sum the number of supportive behaviours supplied by any member of the respondent's social network (e.g. Rook 1984). Others have counted the number of people in the social network, or have asked respondents to rate their level of satisfaction with the level of support they receive (Sarason *et al.* 1983). This variety in approaches to measurement of social support makes it difficult or impossible to generalize across research findings (Barrera 1986). In a review of social support assessment instruments, Barrera (1986) found that measures of social embeddedness, perceived support and enacted support were only slightly related. Sarason and colleagues (1990) also noted the low degree of correlation among the existing measures of social support. Barrera (1986) argues that this low degree of association suggests social support is a heterogeneous concept.

In a review of social support research, Sarason and colleagues (1990) delineated the three views of social support that have been most influential to the field: the interpersonal connectedness approach; the disaggregated support provisions approach; and sense of support approach. Supporters of the interpersonal connectedness approach believe that the structural features of the social support network (e.g. network size) determine the type and amount of support that is received. Advocates of the disaggregated support provisions approach postulate that social support will only be beneficial if the type of support received matches the specific needs triggered by the stressor. This theory focuses on the importance of measuring the varied functional components of support. Finally, advocates of the sense of support approach believe that one's perception of the support received is more influential in buffering stress than the actual amount of support received. These researchers assert that the perceptions of support are heavily determined by one's internal cognitive representations of the self, important others and the nature of interpersonal relationships. Sarason and colleagues (1990) concluded that the sense of support model has been most consistently supported in the research literature. Several studies (Cohen & Wills 1985; Kessler & McLeod 1985) have shown that the amount of perceived available support is more consistently related to outcome measures than the amount of support actually received. In addition, Sarason and colleagues (1994) reported that perceived support measures have consistently yielded the strongest positive association between social support scores and health outcomes.

In addition to the positive effects of social support, there has been a growing recognition that significant others can be a source of considerable distress (Rook 1990, 1992, 1998; Newsom *et al.* 2005). Rook (1990) defines social strain as nega-

tive social exchanges (e.g. criticism, disappointment) in one's social relationships. In a review of the literature, Rook (1998) found what she refers to as a negativity effect: 'evidence that negative social exchanges exhibit stronger or more reliable associations with well-being than do positive social exchanges' (p. 371). Further, researchers have consistently found evidence that social strain exhibits a stronger association with well-being than does social support (Rook 1990, 1998). Ingersoll-Dayton and colleagues (1997) found that negative exchanges were associated with negative affect, particularly among those experiencing more stressful life events. In addition, Rhodes and Woods (1995), using a sample of adolescent mothers, reported that social strain was positively related to depression. Despite these robust findings, few studies have simultaneously assessed both social support and social strain when attempting to understand the impact of social networks on psychological well-being.

There is a growing concern in the field for examining the role of individual members of social support networks (e.g. Sagrestano *et al.* 1999). Mothers' and male partners' roles in pregnant and parenting adolescents' lives have received the most attention. Stevenson and colleagues (1999) found that, for pregnant teens, the reciprocal exchange of support with parents was correlated with a range of well-being measures, including mastery and life satisfaction, whereas the reciprocal exchange of support with friends was not associated with well-being. In addition, support from and satisfaction with male partners is associated with positive psychological outcomes for pregnant and parenting adolescents (Gee & Rhodes 1999; Stevenson *et al.* 1999).

Our proposed conceptualization of social support incorporates perceptions of both positive and negative social exchanges from individual network members in order to examine fully the impact of the social network on psychological outcomes. Consistent with the sense of support model, the current measure, the Social Support Network Questionnaire (SSNQ), assesses three domains of social support: perceived availability, satisfaction and strain. Based on the Arizona Social Support Interview Schedule (ASSIS) (Barrera 1980), the SSNQ includes procedures for deriving distinct indices of perceived social support, satisfaction with support, and available and actual network size. In addition, this measure was developed specifically to assess social support with minority adolescent mothers. By developing and testing this instrument on a group of pregnant and parenting minority adolescents, it is possible to create an instrument that takes into account the unique life circumstances that may impact on the functioning of social support networks for this specific group of women.

Theoretical model

As stated above, the theoretical model of the current measure is consistent with the sense of support perspective in which perceptions of the availability of social support are more important than the amount of support actually provided. The SSNQ is conceptualized as consisting of three domains or factors of social support namely, perceived availability, satisfaction and strain. Perceived availability indexes the number of individuals reported to be available to provide at least one of five categories of support, cognitive guidance, tangible assistance, positive feedback, emotional support and social participation. The level of satisfaction with providers in each of these categories defines the second domain or factor, i.e. satisfaction. The third domain of the SSNQ incorporates recent empirical evidence that levels of distress caused by members in one's social network play an important role in life stress adjustment (e.g. Rook 1990). Four areas are indexed in this domain of social strain, namely, intrusiveness, criticism, conflict and disappointment. In addition to these general indices, the SSNQ included items to index perceived availability of and satisfaction with support during pregnancy. Thus, items pertaining to availability and satisfaction of support received during pregnancy were also theorized to index the latent variables of perceived availability and satisfaction respectively.

The goals of the present study are to report on the preliminary development and validation of the SSNQ. In this study, the authors present the findings of confirmatory factor analyses, correlations and hierarchical multiple regressions of the SSNQ with measures of psychological well-being.

Method

Development of the SSNQ

The SSNQ (see Appendix I) is a modification and extension of the ASSIS (Barrera 1980) that was designed to provide a comprehensive assessment of individuals' networks of social support. The ASSIS includes procedures for deriving indices of available and actual network size, support need and support satisfaction across six support domains. The ASSIS has been used in a wide array of studies (e.g. Barrera & Balls 1983; Goodman *et al.* 1984; Mitchell 1989; Barrera & Baca 1990; Frost & Pakiz 1990; Spieker & Bensley 1994; Bogat *et al.* 1998) and available psychometric data consistently suggest that the measure is reliable and valid for many research purposes (Barrera 1980, 1981, 1986; Barrera *et al.* 1981; Valdenegro & Barrera 1983; Sandler & Barrera 1984).

Similar to the ASSIS and other instruments (e.g. Cobb 1976; Tolsdorf 1976; Hirsch 1979; Wills 1985), the SSNQ was designed to tap the provision of several basic types of social support: emotional support, tangible assistance, cognitive guidance, positive feedback and social participation. In addition, the categories of pregnancy-related support and childcare support were added to assess the unique support needs of pregnant and parenting adolescents.

For each of the five categories of support, two scores were calculated: perceived availability of support and satisfaction with support. Perceived availability of each type of support was assessed by asking the participant to nominate individuals who could provide each type of support if needed. No limits were set on the number of individuals who could be nominated. A summed perceived availability of support score was calculated for each type of support. Satisfaction with each type of support in the past 30 days was measured on a 5-point scale (1 = bad; 5 = very good).

Based on the work of scholars in the area of social strain (e.g. Rook & Pietromonaco 1987; Newsom *et al.* 2005), the SSNQ also contains an assessment of social strain. Participants are asked if, and how often, each network member can be expected to be a source of disappointment (i.e. breaking promises, not coming through for them); intrusiveness (i.e. prying into participants' private matters, bossing them around); criticism (i.e. putting them down); and conflict (i.e. having disagreements, unpleasant interactions). Responses are coded on a 5-point scale, including 1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always. Where appropriate, an individual code (e.g. mother, male partner) and/or a group code (e.g. neighbour) is assigned. Each relationship can also be classified into one of two, mutually exclusive categories, kin or non-kin. The resulting data permit analysis of various support functions by particular providers (e.g. mother, husband), categories of providers (e.g. peers, siblings), or overall groups (i.e. kin, non-kin). The SSNQ utilizes a computer-administered format that provides a convenient way of collecting the data. Depending on the literacy level of the participants, the questionnaire can be self- or interviewer-administered.

Participants

Participants included 536 females (68.4% pregnant; 43.4% parenting) attending an alternative school for pregnant and parenting adolescents in a large, Midwestern city. These data were collected as part of an ongoing longitudinal study over the course of two academic school years. Participants had a mean age of 15.6 years ($SD = 1.46$) and 98.7% had never been

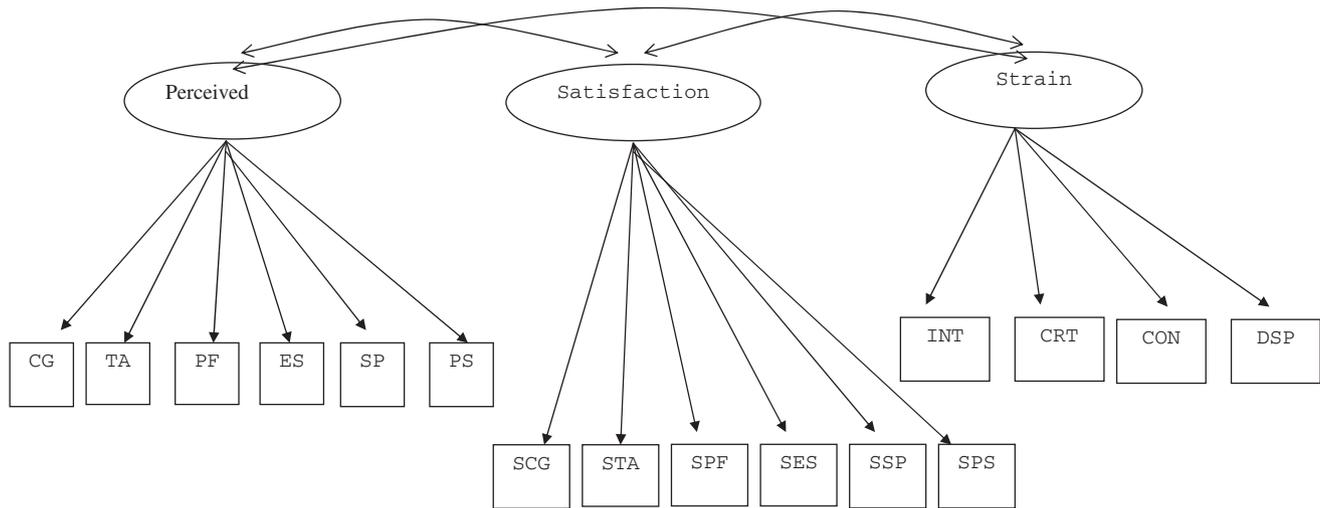


Figure 1. Theorized model of the Social Support Network Questionnaire. CG, Cognitive Guidance; TA, Tangible Assistance; PF, Positive Feedback; ES, Emotional Support; SP, Social Participation; PS, Pregnancy-Related Support; the indicators with S preceding the variable name indicates satisfaction with the respective type of support. INT, Intrusiveness; CRT, Criticism; CON, Conflict; DSP, Disappointment.

married. Most (92.6%) of the participants were African-American, while 6.4% were Latina and 0.7% Other. Data on the racial background of one participant were unavailable. *T*-tests indicated that there were no significant differences between pregnant and non-pregnant adolescents in terms of amount of social support perceived, satisfaction with support and social strain. Similarly, there were no significant differences between parenting and not parenting adolescents with the exception of criticism (parenting adolescents reported slightly more criticism). Given the minimal differences between the groups, we chose to analyse the data for all participants together.

Procedure

An African-American female research associate in a Master's degree programme in social work individually administered the measures to most of the participants. A Latina postdoctoral fellow administered interviews to the Latina participants. First, using a laptop computer, the interviewer asked the participant for demographic information, and administered the other measures used in the study (see Measures for a description). This section of the interview contained some measures not included in the current study and took approximately 1 to 2 h to complete. The second part of the interview entailed administration of the SSNQ which was administered by reading the questions on the screen and recording the participants' responses. The SSNQ section of the interview took approximately 25 min to complete. Participants were paid \$10 for their participation.

Measures

Demographic information

Each participant was asked about her age, race, marital status, number of children and receipt of public assistance.

Psychological functioning

The 13-item depression subscale and the 10-item anxiety subscale of the Symptom Checklist-90-R were used to assess psychological functioning (Derogatis 1983). Derogatis (1983) reported high internal consistency and good test-retest reliability for both the depression subscale ($\alpha = 0.90$; $r = 0.82$) and the anxiety subscale ($\alpha = 0.85$; $r = 0.80$). The internal consistency of both the depression and anxiety subscales in this study were high as well ($\alpha = 0.82$ and 0.85 respectively). Anxiety $M = 7.2$ ($SD = 6.8$); depression $M = 12.7$ ($SD = 9.3$).

Social support and social strain

The SSNQ is described above.

Results

Measurement model

Confirmatory factor analytical (CFA) techniques were utilized to test the theoretical model (see Fig. 1) underlying the SSNQ.

Table 1. Standardized parameters for the three SSNQ factors

Indicators	Latent variables		
	Perceived availability	Satisfaction	Strain
Cognitive guidance	0.79		
Tangible assistance	0.89		
Positive feedback	0.90		
Emotional support	0.71		
Social participation	0.63		
Pregnancy-related support	0.74		
Satisfaction with			
Cognitive guidance		0.53	
Tangible assistance		0.60	
Positive feedback		0.56	
Emotional support		0.39	
Social participation		0.51	
Pregnancy support		0.55	
Criticism			0.82
Intrusiveness			0.76
Conflict			0.87
Disappointment			0.84
GOF indices			
χ^2 (101) = 158.317	GFI = 0.93	Std RMR = 0.048	
RMSEA = 0.048	AGFI = 0.91	CFI = 0.97	

AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; GFI, Goodness of Fit Index; GOF, Goodness of Fit; RMSEA, Root Mean Square Error of Approximation; SSNQ, Social Support Network Questionnaire; Std RMR, Standardized Root Mean Square Residual.

All analyses were carried out with LISREL 8.30. As the preliminary objective was to test and confirm the theoretical model of the scale for a sample of pregnant adolescents, covariance matrices were utilized in all CFA with maximum likelihood (ML) as the estimation procedure. All variables were treated as continuous (all indicators of the latent variables were on a 5-point or larger scale). As is the general practice, a number Goodness of Fit Indexes were utilized to index model fit, these included $\chi^2/d.f.$ (<2.5), Root Mean Square Error of Approximation (0.00–0.08; at the 90% confidence level), Standardized Root Mean Residual (<0.05), Goodness of Fit Index, Adjusted Goodness of Fit Index and Comparative Fit Index. The target values for the last three indexes were values greater than 0.90. A lack of fit indicated the need to re-specify the original measurement model. Post-hoc model fitting procedures then ensued and the analyses thus became more exploratory in nature at this point. The strategy employed in this post-hoc iterative process was based on the significance of the parameter estimates, values of the standardized residuals and modification indexes provided by LISREL 8.30.

The theoretical model specified in Fig. 1 was tested. As it can be seen (see Table 1), the theorized model fit the data well. For the current sample of pregnant and parenting adolescents, per-

Table 2. Correlations of factor scores with psychological variables (Listwise $n = 456$)

	1	2	3	4	5
1. Strain factor	–				
2. Perceived availability of support factor	0.61**	–			
3. Satisfaction with support factor	–0.02	0.09	–		
4. Depression	0.35**	0.09	–0.11	–	
5. Anxiety	0.35**	0.15*	–0.06	0.73**	–

* $P < 0.05$ (two-tailed); ** $P < 0.01$ (two-tailed).

ceived availability, satisfaction with social support and social strain can be conceptualized as three distinct factors. Standardized coefficients were all above 0.50 with the exception of satisfaction with emotional support. The per cent accounted for each construct was also calculated. The perceived availability factor and strain factor accounted for more than 50% of the variance (61% and 68% respectively). The satisfaction with support factor, however, accounted for only 28% of the variance, indicating that more than half of the variance specified by the indicators is not accounted for by the construct. A strong positive correlation ($r = 0.61$) was obtained between perceived availability and strain while a slightly positive correlation ($r = 0.09$) between satisfaction and perceived availability was indexed.

Internal consistency

The factors identified through the CFA were examined for internal consistency. The strain, perceived availability of support and satisfaction with support factors all demonstrated adequate internal consistency ($\alpha = 0.90, 0.68$ and 0.88 respectively).

Correlations

The correlations of the factor scores with each other and with measures of psychological functioning are presented in Table 2. Consistent with previous studies, the perceived availability of support and satisfaction with support factors had a relatively low correlation. Further, strain and perceived availability of support had a moderately high association.

The strain factor was moderately correlated in the expected direction with the psychological variables included in this study (i.e. depression and anxiety). The perceived availability of support factor had a low but significant correlation with anxiety

Table 3. Hierarchical regression analyses for support and strain predicting anxiety and depression ($n = 295$)

Predictors	Anxiety				Depression			
	B	SE B	B	ΔR^2	B	SE B	B	ΔR^2
Step 1: demographic variables				0.00				0.00
Age	0.17	0.26	0.04		0.20	0.35	0.03	
Welfare receipt	-0.68	0.76	-0.05		-0.86	1.03	-0.05	
Step 2: social strain	0.12	0.02	0.40***	0.12	0.19	0.03	0.46***	0.13
Step 3: perceived availability	-6.610E-02	0.05	-0.09	0.01	-0.17	0.07	-0.18**	0.02
Step 4: satisfaction	-7.138E-02	0.10	-0.04	0.00	-0.18	0.13	-0.08	0.01
Total R^2				0.13				0.16

The tabled values for B reflect B s after Step 4.

** $P < 0.01$; *** $P < 0.001$.

but was not significantly correlated with depression. Finally, the satisfaction factor was not correlated with either measure of psychological well-being.

Support, strain and psychological functioning

Next, using hierarchical multiple regression, we further examined the associations between the identified factors and psychological functioning. In each regression, we entered demographic variables (i.e. age and receipt of welfare benefits) in the first step. The strain factor score was entered in the second step, the perceived availability factor score in the third step and the satisfaction factor score in the fourth step. Regressions were repeated separately for depression and anxiety. As presented in Table 3, the inclusion of the social support and social strain factors in the model increased the variance accounted for by 13% over and above the demographic variables. However, this effect was carried by social strain as it was the only variable that was a significant predictor of anxiety ($\Delta R^2 = 0.12$). The regression predicting depression revealed that the addition of social support and strain variables increased the variance accounted for by 15% over and above the demographic variables. Strain and perceived availability were significantly associated with depression in the expected directions (see Table 2).

Based on the literature suggesting the importance of examining the contributions of specific providers (Stevenson *et al.* 1999), we examined the influence of support and strain in relationships with the two most frequently nominated providers on the adolescent mothers' networks, her mother and male partner. Mothers were nominated by 84.8% of the adolescents and male partners were nominated by 50.8%. Regressions were conducted on the subsample of adolescents who nominated both of these individuals ($n = 133$). In contrast to the pattern of correlations for overall support, significant negative correlations were obtained for strain and perceived availability for both mothers ($r = -0.29$) and partners ($r = -0.58$).

As in the previous set of regressions, age and welfare receipt were entered in the first step. Then, social strain from mothers and partners were entered in the second step, perceived availability in the third step and satisfaction with support in the fourth step. The inclusion of the social support and social strain factors in the model increased the variance accounted for by 11% over and above the demographic variables when predicting anxiety and 17% when predicting depression. However, regression results revealed that the male partner strain was the only variable significantly associated with anxiety or depression (see Table 4). The step that included mother and male partner strain accounted for 10% and 16% of the variance in anxiety and depression respectively (see Table 4).

Discussion

The goal of the present study was to examine the structure of social support for pregnant and parenting, urban minority adolescents. As theorized, the SSNQ is composed of three distinct factors, namely perceived availability of support, satisfaction with support and social strain. Consistent with some previous literature on social support (McCormick *et al.* 1987; Sarason *et al.* 1987), the dimensions of perceived availability and social strain were uncorrelated, implying that they are distinct. As previous literature has reported (e.g. Finch *et al.* 1989; Schuster *et al.* 1990), strain was the most consistent predictor of psychological well-being. Further, strain in relationships with male partners added unique variance to the prediction of both anxiety and depression.

This study reports higher correlations between social strain and perceived availability of support than typically found in the literature (e.g. Rook 1984; Riley & Eckenrode 1986; Ruehlman & Wolchik 1988; Finch *et al.* 1989). However, these differences may be explained by the demographic characteristics (e.g. age, ethnicity) of the populations studied. First, the vast majority of participants in this study were African-American. Research

Table 4. Hierarchical regression analyses for mother and male partner support and strain predicting anxiety and depression ($n = 131$)

Predictors	Anxiety			ΔR^2	Depression			ΔR^2
	B	SE B	B		B	SE B	B	
Step 1: demographic variables				0.00				0.02
Age	7.479E-02	0.41	0.02		0.00	0.52	0.02	
Welfare receipt	0.20	1.19	0.02		0.90	1.55	0.05	
Step 2: social strain				0.10				0.16
Mother	0.13	0.20	0.07		0.29	0.26	0.13	
Partner	0.53	0.19	0.26**		0.83	0.25	0.31**	
Step 3: perceived availability				0.00				0.00
Mother	-0.26	0.52	-0.07		0.51	0.68	0.10	
Partner	-0.11	0.44	0.03		-6.165E-02	0.57	-0.01	
Step 4: satisfaction				0.00				0.02
Mother	8.894E-02	1.1	0.00		-2.1	1.37	-0.20	
Partner	-0.651	0.97	-0.08		-7.305E-02	1.26	-0.01	
Total R^2				0.11				0.19

The tabled values for B reflect B s after Step 4.

** $P < 0.01$

suggests that adolescent mothers' perception and/or receipt of social support may differ as a function of ethnicity (e.g. Sagrestano *et al.* 1999; Gee *et al.* 2007). For example, research has shown that African-American families tend to have strong extended family ties (Stack 1974), including a reliance on the baby's maternal grandmother for social support, particularly during the perinatal period (e.g. Gee & Rhodes 2003; Dallas 2004). Further, because these young mothers were enrolled in an alternative high school for pregnant and parenting adolescents, they may have had more access to social services and may have benefited from being in a school environment that was more supportive of their needs as young mothers. The results of the present study should be replicated in other ethnic minority populations as well among pregnant and parenting adolescents living in rural areas. Finally, it would be useful to modify the SSNQ for use with other populations (e.g. low-income, urban adolescent males) in order to replicate the current findings regarding the structure of social support.

One strength of the current study is that it addresses a gap in the field of social support by specifically defining and testing the components of social support. In addition, we have included social strain, an aspect of social relationships that has not been studied simultaneously with social support. Furthermore, we have tested this model for a sample of minority, low-income, pregnant and parenting adolescents. Examining social support in this population is crucial for understanding the ways in which the support process differs for adolescents undergoing major life transitions.

In this sample, the majority of pregnant and parenting adolescents relied on their own mothers for support and over half relied on a male partner for support. Interestingly, the pattern of

relationships between strain and support from these two providers differed from the patterns found with the overall support network. Specifically, for both mothers and partners, perceived availability of support was significantly negatively correlated with perceptions of social strain. However, for the overall support network, a significant positive relationship was found. These findings may highlight a differential vulnerability to negative social interactions in extremely close personal relationships compared with other less intimate social relationships. Nonetheless, these findings demonstrate the importance of examining the role of individual providers when studying the influence of social support.

The regression results for individual providers reiterate the need for social support researchers to assess social support from individual providers. As previously stated, research on pregnant and parenting adolescents has examined the roles of mothers and partners most frequently. However, other important providers should be examined as well. For example, Rhodes and colleagues (1992) found that young African-American mothers with natural mentors reported lower levels of depression than mothers without natural mentors. In addition, Klaw and colleagues (2003) found that when relationships with natural mentors were maintained over 2 years post partum, adolescent mothers were more likely to remain in school or graduate. Continued research in this area may help to clarify inconsistencies in previous research on the correlates of social support and psychological well-being.

One strength of the SSNQ measure is that it was developed to be sensitive to the particular needs (e.g. pregnancy-related support) and life circumstances of pregnant and parenting adolescents. However, this study should be replicated on young

women during the first few years after the birth of their child, to ascertain whether social support needs change during the transition to parenthood. It is likely that the structure of an adolescent's social support network changes over time. For example, research has demonstrated that social support from the baby's father decreases following the birth of the baby (e.g. Gee & Rhodes 2003) and that the transition to parenthood brings about changes in roles and responsibilities for maternal and paternal grandparents (e.g. Dallas 2004) and siblings (East *et al.* 2006). For these reasons, longitudinal research should be conducted in order to determine how the structure of adolescent mothers' social support networks might change to meet their evolving needs.

Future validation efforts might also be strengthened through the inclusion of additional validity criteria, such as coping skills, life satisfaction and self-esteem. Similarly, obtaining multiple indicators of support and strain as well as convergent measures of psychological functioning would complement the findings that emerged in this study. Tests of inter-rater reliability, or the extent to which network members corroborate participants' reports of problematic exchanges, would be useful in this regard (Barrera *et al.* 1985). Attempts should also be made to further examine the discriminant validity of the various types of support and strain and to determine their linkages with specific outcomes. In addition, future efforts should be made to establish the construct validity of this measure.

Beyond these research implications, the findings of this study underscore the complexity of the support process and the need for researchers, practitioners and educators to consider the multifaceted nature of individuals' social networks. An understanding of the complex nature of social support can also suggest new interventions to improve the quality of life and promote better outcomes for teenage mothers and their families. Healthy maternal adjustment may have a profound effect on children's development and well-being (e.g. Nath *et al.* 1991). Hall (1996) stated that children of depressed and anxious parents have a substantially increased risk of developing a psychiatric disorder, and are less likely to have a secure attachment to their parents. Similarly, interventions should be directed at identifying network members who are sources of stress and developing strategies to reduce interpersonal strain. Finally, social support research has important public policy implications, especially in light of recent efforts at welfare reform. For example, Sansone (1998) found that support contributed significantly to reduced welfare dependence for long-term welfare recipients.

In sum, given the implications of social support networks for the psychological and economic well-being for pregnant and parenting adolescents, it is crucial to develop culturally appro-

priate measures of the construct. The current study contributes to the social support literature by providing a theoretically based measure that takes into account the particular life context of low-income, minority adolescent mothers. This measure could assist practitioners and educators in identifying sources of strength and support that may not be apparent using traditional intake measures.

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Appendix I

Social Support Network Questionnaire

Interviewer: ‘I would like to spend the next 25 to 30 minutes talking with you about the people who are important to you in a number of different ways. To begin with, I am going to ask about the people you turn to for different kinds of help and support. You can give me just their first names or their initials if you wish. These people might be friends, family members, ministers, teachers, doctors, or anyone else you know. If you’re not sure you understand the question, please tell me and I will try to make it clearer’.

Section one: social support

- 1 Emotional Support: If you wanted to talk to someone about something personal or private, who would you talk to – for instance, if you had something on your mind that was worrying you or making you feel down? (Participant generates a list of people).
 - a. How did you feel about the way things went the times you talked about personal concerns this past month? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 2 Tangible Assistance: Who of the people you know would lend or give you something you needed or pitch in to help you with something you needed to do? These would be people who
 - a. During the past month, how did you feel about the way things went the times the people you mentioned told you that they liked your ideas or something that you did? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 3 Cognitive guidance: Who would you go to if you needed advice or information – for example, if you didn’t know where to get something or how to do something you needed to do? Remember, you can name the same people that you mentioned before, or you can name new people.
 - a. This past month, how did you feel about the advice and information you did get? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 4 Positive feedback: Who are the people that you can expect to let you know that they like your ideas or the things that you do? Remember, you might have listed these people before or they can be new people.
 - a. During the past month, how did you feel about the way things went the times the people you mentioned told you that they liked your ideas or something that you did? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 5 Socializing: Who are the people you get together with to have fun and relax? These could be new names or the ones you listed before.

- a. During the past month, how good did you feel about your experiences the times that you got together with people to have fun and relax? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 6 Pregnancy-related assistance: If you wanted to talk to someone about being pregnant or get some other type of help related to your pregnancy – a ride to the doctor, clothes for the baby – who would you go to? These could be people you've already mentioned or new people.
- a. How did you feel about the help with your pregnancy you received from the people mentioned during this past month? (Get rating for each person nominated; 1 = Bad; 2 = Not too good; 3 = Okay; 4 = Good; 5 = Very good.)
- 2 Intrusiveness: How often does _____ butt into your business – watch over the things you do, boss you around, or act like they know what's best for you? (Get rating for each person nominated; 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always.)
- 3 Criticism: How much does _____ criticize you – put you down, make you feel stupid? (Get rating for each person nominated; 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always.)
- 4 Conflict: How often do you have fights or strong disagreements with this person? (Get rating for each person nominated; 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always.)

Section three: general network information

Section two: social strain

Interviewer: 'We've been talking about the ways you help your friends, family, and other people you know and the ways they help you. Although they may not mean to, the people that are the most help to us, sometimes do things that are hurtful. I am now going to ask a few questions about the ways the people in your life cause problems for you'.

- 1 Disappointment: First, for each of the people you've named, I'd like you to tell me how often you can expect that person to disappoint you – break promises they've made, not come through for you when you most need them, or disappoint you in some other way? (Get rating for each person nominated; 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always.)
- 1 What is _____'s relationship to you? [Record relationship for each person on the participant's network list]
- 2 How old is _____? If you don't know his/her exact age, just tell me how old you think they are. [Get age for each person nominated]
- 3 How often do you speak to _____ either on the phone or in person? [Get rating for each person nominated]
1 = Less than once a month; 2 = More than once a month; 3 = About once a week; 4 = A few times every week; 5 = Almost every day.
- 4 How far from you does _____ live? [Get rating for each person nominated]
1 = Lives with; 2 = Same neighbourhood (but not in the same household); 3 = Within an hour's ride (but not in the same neighbourhood); 4 = Midwest (Illinois, Indiana, Michigan, Wisconsin, Ohio); 5 = Other city or state (not in the Midwest)

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