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The Role of Life Stress and Social Support in the Adjustment of Sexually Victimized Pregnant and Parenting Minority Adolescents[1]

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Associations among sexual victimization and the psychosocial functioning of African American and Latina pregnant and parenting adolescents were examined. Forty-seven (17.7%) of the 265 participants reported histories of sexual victimization, most of which was unwanted sexual intercourse. The victimized adolescents reported higher levels of depression, anxiety, and life stress and, although the two groups reported no differences in their levels of social support, support was found to be differentially related to depression and anxiety in the two groups. In particular, victims derived benefits from social support at low levels of stress, but social support provided no protection against depression and anxiety at average or high levels of stress. For nonvictims, social support provided no benefits at low levels of stress, but protected against depression and anxiety at moderate levels of stress and against depression at high levels of stress. Implications of these findings for research, theory, and intervention are discussed.

KEY WORDS: sexual victimization; conservation of resources theory; social support; pregnant and parenting teenagers; stress.

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Sexual abuse is pervasive in our culture and its harmful effects on victims' psychosocial and sexual adjustment have been well-documented (Fromuth, 1986; Gidycz, Hanson, & Layman, 1995; McCloskey, 1997; Peters, Wyatt, & Finkelhor, 1986; Russell, 1986). Actual prevalence rates of victimization vary across studies, but it appears to be particularly widespread among adolescent mothers (Butler & Burton, 1990; Collins, 1997; Gershenson, Musick, Ruch-Ross, Magee, Rubino, & Rosenberg, 1989; McCullough & Scherman, 1991; Stock, Bell, Boyer, & Connell, 1997). Certain emotional and behavioral correlates of victimization, such as a vulnerability to sexually exploitive relationships (Briere & Runtz, 1987; Russell, 1984), an earlier initiation of sexual intercourse, a reduced likelihood of practicing contraception, having multiple sexual partners (Stock et al., 1997), and heightened levels of sexual activity (Fromuth, 1986; Polit, White, & Morton, 1990; Silbert & Pines, 1981) have been cited as contributing to victims' risk for early, unplanned pregnancies.

In light of the higher prevalence rates, researchers have begun to examine the consequences of sexual victimization in this group. Adolescent mothers who have sustained sexual victimization have been found to be more psychologically distressed than nonvictimized mothers (Lanz, 1995; Musick, 1993; Rhodes, Ebert, & Meyers, 1993), and to experience less satisfying social relationships (Lanz, 1995; Rhodes et al., 1993). Victims often find their usual supports insufficient or withdrawn in response to their increased needs, distress, and emotional sensitivity (Prodromidis, Abrams, Field, Scarfidi, & Rahdert, 1994). Similarly, they may be unable to effectively elicit the support that they need, or unable to tolerate the interpersonal conflict, blaming, and strain that sometimes accompanies the exchange of support (Herbert & Dunkel-Schetter, 1992; Lakey, Tardiff, & Drew, 1994; Rhodes & Woods, 1995; Rook, 1992; Ullman, 1996). Indeed Symonds (1980) has described the "second injury" to victims, referring to the lack of support from the community, family, and friends experienced by many victims.

These preliminary observations underscore the necessity of examining the role of social relationships among pregnant and parenting sexually victimized adolescents. Relative to their nonvictimized counterparts, such women appear to have relatively higher levels of psychological distress and feelings of vulnerability. At the same time, they may have less satisfying and helpful support resources with which to cope with their heightened stress. In fact, it has been suggested that specific explanations regarding supportive processes need to be developed with regards to victims of sexual assault (Ullman, 1996). For instance, Cutrona and Russell (1990) reported that victims did not fit well into their theory of "optimal matching" in social support and suggested that a more differentiated model of social support for specific events needs to be developed. This theory predicts that uncontrollable events

require social support that fosters emotion-focused coping, whereas controllable events require social support that fosters problem-focused coping. Although the findings of most of the studies that they reviewed were consistent with this theoretical model, they found that no aspect of social support attenuated the effects of sexual victimization (e.g., Popiel & Susskind, 1985).

The same may hold true for the "buffering hypothesis" of social support, which suggests that social support protects against the adverse effects of negative life events. The protective benefits occur primarily when levels of stress are high, but not necessarily when levels are low, presumably because individuals are able to manage low levels of stress on their own (Wills, 1985). Although substantiated in previous studies, this theory does not appear to be applicable under all circumstances (Ullman, 1996). For example, in a study of parents of children with cancer, social support predicted better adjustment among the parents of survivors, but it was not related to the adjustment of parents whose children had passed away (Morrow, Hoagland, & Carnrike, 1981). Similarly, Cutrona (1986) found that social support showed a progressively weaker relationship to depression as levels of maternal postpartum stress increased.

Taken together, these findings suggest that certain individuals may have a threshold for stress, after which their coping resources (both personal and interpersonal) offer little or no protective benefit. This overall pattern of findings is consistent with Hobfoll's general stress model (Hobfoll, 1988, 1989), the conservation of resources theory (COR). The basic tenet of COR is that individuals strive to obtain and retain personal and social resources and that they experience stress when circumstances threaten or diminish these resources. Moreover, resources tend to beget more resources, whereas a loss of resources tends to result in further loss. According to COR, higher functioning individuals are better able to effectively cope with low or mild stress on their own, to create and sustain social resources, and to effectively use these connections to withstand high levels of stress. Lower functioning individuals tend to have difficulty sustaining helpful social resources and tend to perceive even minor events as stressful. Such individuals may call on support in less objectively stressful circumstances and, as stress increases, they may be hampered in their receipt of support by their difficulties handling interpersonal interactions and the relatively poor quality of support that is available to them (Hansson, Jones, & Carpenter, 1984; Hobfoll, Shoham, & Ritter, 1991).

Consistent with this model, Hobfoll et al. (1991) demonstrated the ways in which postpartum women who were low in mastery derived diminishing benefits from their support networks under conditions of high stress, whereas those who were higher in mastery derived increasing benefits under conditions of high stress. As with the low-mastery women, victimized adolescents

may be less able to derive benefits from support under conditions of increasing stress (Hansson, Jones, & Carpenter, 1984; Hobfoll, 1991; Ullman, 1996). This may be particularly true among low-income minority victims, who tend to have access to relatively few resources (Dressler, 1985; Hobfoll et al., 1991; Riely & Eckenrode, 1986).

The purpose of this study is to test a series of hypotheses that are derived from COR theory. We predict that the victimized adolescents will be more psychologically distressed than nonvictimized adolescents and less able to utilize social support to withstand stress. In particular, victimized adolescents are expected to benefit from social support at low levels of stress, but to derive diminishing benefits as levels of stress increase. In contrast, the nonvictimized adolescents are expected to derive progressively more benefits from support as stress increases in magnitude. By testing theoretically derived hypotheses of support and emotional functioning, we hope to develop a better understanding of sexual victimization as a risk factor for adjustment difficulties among pregnant and parenting adolescents and to identify the conditions under which social support may (and may not) have protective effects.

METHOD

Participants were 265 minority adolescents, ranging in age from 11 to 19 ($M = 15.88$, $SD = 1.41$). All of the young women were unmarried, 51.2% reported living with their mothers, and 68.5% reported receiving some form of public assistance. In terms of living arrangement, 21.8% reported living in public housing, 53.8% reported living in a private apartment, 22.9% reported living in a house, and .4% reported living in a shelter. All of the young women had completed some high school ($M = 2.85$ years, $SD = .39$). Most of the participants were African American (94.3%), whereas the remaining participants were Latina (5%). Information on racial identity was unavailable for two participants. All of the participants were either pregnant (61.2%) or had delivered their infants within the previous 3 months (38.8%). Among the pregnant adolescents, 91.9% were expecting their first children (primaparous), 7.5% were expecting their second children, and one participant (.6%) was expecting her third child. Among the nonpregnant participants, 86.7% had recently delivered their first child, 7.5% had recently delivered their second child, and one participant had recently delivered her third child. Compared with primaparous women ($N = 148$), young women who already had one or more children ($N = 115$), were slightly older, $M =$ 15.59 versus 16.26 years, t (261) = 3.90, $p < .001$, partial eta squared = .06, and less anxious, $M = 15.09$ versus 16.74, t (261) = −2.15, $p < .05$, partial squared eta = .02. They were also more likely to receive welfare benefits,

χ^2 (1,263) = 7.59, $p < .01$, which probably reflects welfare benefits being tied to child birth. No group differences emerged in terms of victim status, depression, social support, life events, educational attainment, living arrangements, or the likelihood of being employed. In light of this overall comparability, and the fact that victims and nonvictims were equally distributed in the two groups, the primaparous participants were combined with the parenting participants for all subsequent analyses.

Measures

Social Support

The Social Support Network Questionnaire (SSNQ; Rhodes, Meyers, Davis, Ebert, & Gee, 1998) was used to assess social support and social strain. The SSNQ is a modification and extension of the Arizona Social Support Interview Schedule (ASSIS; Barrera, 1981). The SSNQ assesses seven types of social support: emotional, tangible assistance, cognitive guidance, positive feedback, social participation, pregnancy-related assistance, and child-care assistance. Participants were asked to nominate individuals who were available to provide each type of support within the past month and to rate on a five-point scale their satisfaction with the support. The SSNQ has demonstrated adequate internal consistency, alpha = .65 (Rhodes et al., 1998).

Psychological Adjustment

The Symptom Checklist-90-R (SCL-90-R; Derogatis, 1983) was used to measure psychological adjustment. The 13-item depression subscale of the SCL-90-R and the 10-item anxiety subscale were administered. In this study, the internal consistency for both the depression and the anxiety subscales was .86.

Sexual Experiences Survey (Koss & Oros, 1982)

A shortened version of the Sexual Experiences Survey was used in this study. If a respondent indicated that she had experienced unwanted sexual intercourse or unwanted kissing or fondling or both, she was asked a series of four follow-up questions concerning her age at the time of the activity, her perpetrator's age at the time of the activity, her perpetrator's relation to her, and the type of sexual activity.

Life Stress

Life stress was assessed using the Life Events Survey (LES; Sarason, Johnson, & Seigel, 1979). This 57-item measure assesses the occurrence and valence of major stressors/life events occurring in the past year. Each event is rated on a five-point scale ranging from extremely negative to extremely positive. A total life stress score was calculated by totaling the weighted scores for all of the events experienced as negative. Of note, there were no items involving sexual victimization on the LES.

Background/Demographic Information

A set of fixed-format questions was used to obtain information regarding participants' age, race, marital status, number of children, living arrangements, educational attainment, and employment.

Procedure

Participants were recruited from an alternative public school for pregnant students. The school is located in a low-income neighborhood of a large mid-western city. Students enter the school at various stages of their pregnancies and are permitted to remain in the school for up to one semester after delivery. The interviews were conducted at the school and lasted approximately one and a half hours. An African American woman interviewed the African American students and a Latina woman interviewed the Latina students. The African American woman was a life-long resident of the community in which the school was located, and the Latina woman was a graduate student in developmental psychology. Both women were extensively trained in interview methods (approximately 40 hr) and met regularly with a supervisor to review procedures and address any difficulties or concerns. The interviews were individually administered via a laptop computer from which the interviewer read the questions as participants viewed the screen. Informed consent was provided by the students and their parent(s) and students were compensated with a $10 voucher to the school-based baby boutique.

RESULTS

In total, 47 of the participants (17.8%) reported histories of at least one incident of sexual victimization. In most cases (72.3%) this victimization

involved unwanted sexual intercourse, while 27.7% of the incidents involved unwanted kissing or fondling. The participants were, on average, 10.96 years old when the first incident occurred, with a minimum age of 4 and a maximum age of 17. Incidents took place an average of 4.57 years prior to the administration of the questionnaire, ranging from 13 years ago to less than 12 months ago. According to the victims, the perpetrators ranged in age from 11 to 58 years and were, on average, 12.77 years older. All of the perpetrators were male, the largest proportion of whom were boyfriends or ex-boyfriends (23.4%), followed by friends (17%), uncles (14.9%), stepfathers (12.8%), strangers, (12.8%), cousins (6.4%), teachers (6.4%), neighbors (4.3%), and brothers (2.1%).

Victimized participants were compared with nonvictimized participants on a number of variables and no differences emerged in terms of number of children, receipt of public assistance, living arrangements, likelihood of being employed, or in the amount of support that was reported to be available. Victimized women were, however, younger than nonvictims, $M = 15.53$ versus 15.98 years, $t = 1.98$ (261), $p < .05$, partial eta squared = .02, and had completed less school, $M = 2.74$ versus 2.91, $t = -2.16$ (261), $p < .05$, partial eta squared = .03. Additionally, victimized women were significantly more depressed, $M = 30.62$ versus 24.36, t (56.5) = −3.45, $p < .01$, partial eta squared = .07) and anxious, $M = 20.00$ versus 15.14, t (54.7) = −3.73, $p < .00$, partial eta squared = .09, than nonvictimized participants, and reported experiencing a greater number of negative life events, $M = 7.55$ versus 5.12, t (262) = −3.55, $p < .01$, partial eta squared = .05.

As discussed earlier, it is possible that victimized participants may be less able to benefit from their support resources and more negatively affected by life events than nonvictimized participants. First, a series of analyses were performed regarding the relationship among life events, social support, and depression. In particular, a hierarchical multiple regression was performed, in which both the main effects of victim status and the various ways that victim status interacted with life stress and social support were tested (see Table I). As suggested by Aiken and West (1991), independent variables were centered over the mean to control for multicollinarity between first order and interaction terms. This revealed a main effect for victim status, life events, and social support, such that victim status and life events were associated with higher levels of depression, and satisfaction with social support was associated with lower levels of depression. Next, each interaction was entered in a separate block. Following the recommendations of McClellan and Judd (1993), interactions that were at least marginally significant and that explained a minimum of 1% of the variance were considered to be accurate. A three-way interaction of victim status, life events, and satisfaction with support was also found, suggesting that the main effects

Table I. Regression of Depression on Victim Status, Stressful Life Events, Social Support, and Interactions

	B	*SE B*	β	*T*
Step 1				
F change = 19***; R^2 change = .18				
Victim status	4.46	1.40	.18	3.18**
Stress	.70	.12	.33	5.67****
Support	−2.13	.97	−.12	−2.19*
Step 2				
F change = 2.32 (*ns*); R^2 change = .07				
Victim Status × Life Stress	.42	.28	.11	.15 (*ns*)
Step 3				
F change = 1.72 (*ns*); R^2 change = .005				
Victim Status × Satisfaction	3.48	2.66	.08	1.31 (*ns*)
Step 4				
F change = .52 (*ns*); R^2 change = .001				
Stress × Support	.18	.25	.04	.72 (*ns*)
Step 5				
F change = 4.23*; R^2 change = .0133				
Victim Status × Stress × Support	1.18	.57	.16	2.07*

****$p < .0001$. ***$p < .001$. **$p < .01$. *$p < .05$.

might vary for victims and nonvictims. Thus, we investigated the interaction by examining the degree to which social support buffered against depression for both victims and nonvictims given varying levels of stressful life events.

Following the procedures outlined by Aiken and West (1991) for testing three-way interactions, the effect of social support on depression was examined when victim status and level of stress were held constant at several levels. Specifically, the beta weight when social support was regressed on depression was examined with life events held constant at levels that were high (1 standard deviation above the mean), low (one standard deviation below the mean), and average (at the sample mean), with victim status held constant at either the victimized or nonvictimized level. A significant beta weight would indicate that social support affects depression given the conditions of victim status and life stress specified in that regression. Because the sample is not broken down into groups, this approach has the advantage of retaining statistical power. Furthermore, unlike median split techniques, it provides an accurate mathematical representation of interactions by indicating that the effect of one variable (e.g., social support) is dependent on the level of the other variable, e.g., stress (Aiken & West, 1991). In order to further elucidate the nature of interactions, the regression lines representing the various levels of the interaction were plotted.

The three regression weights, when sexual history was held constant (as nonvictimized) are shown at the top of Table II, and the plot of the regression

Table II. Beta Weights When Depression Regressed on Social Support Under Varying Conditions of Life Stress and Victim Status to Investigate Interaction of Victim-Status, Stressful Life Events, and Social Support

Life stress	β	*SE B*	*B*	*T*	Significance	Constant
Victim status: nonvictim						
Low	−2.33	1.55	−.13	−1.51	.13	22.0
Average	−2.87	1.06	−.17	−2.70	.01	24.6
High	−3.41	1.74	−.20	−1.96	.05	27.1
Victim status: victim						
Low	−6.90	4.27	−.40	−1.61	.11	24.2
Average	−2.33	2.80	−.13	−.84	.40	28.2
High	2.23	2.53	.13	.88	.38	32.1

Note. Degrees of freedom for all six regression equations is 258.

lines is shown in Fig. 1a. As indicated by the pattern of significant beta weights, social support is significantly associated with less depression under conditions of average stress, and is marginally associated with depression under conditions of high stress ($p = .05$), but is not associated with less depression under conditions of low stress. The three regression weights when sexual history was held constant as victimized are also shown at the bottom of Table II, and the plot of the regression lines is shown in Fig. 1b. Several results are of note. First, as indicated, social support does not appear to be reliably related to depression among those with a history of victimization. Thus, even at low levels of stressful life events, the regression weight for social support only approaches significance ($p = .109$) because the standard deviation is large relative to the beta weight. Second, at levels of high stress, greater social support is actually associated with higher levels of depression, although this association does not reach the level of statistical significance. This lack of reliability suggests that, whereas some victims may use social support, this does not occur systematically and, at high levels of stress, social support might be associated with heightened levels of depression.

Parallel analyses were performed regarding the relationship between life events, social support, and anxiety. A hierarchical multiple regression was performed in which both the main effects of victim status and the various ways that victim status might interact with life stress and social support were tested (see Table III). Independent variables were centered over the mean to control for multicollinarity between first order and interaction terms. This revealed a main effect for victim status and life events, and a marginally significant effect for social support ($p = .058$), such that victim status and negative life events were associated with higher levels of anxiety, and satisfaction with social support was associated with lower levels of anxiety. Next, each interaction was entered in a separate block. A two-way interaction of victim status and life events was found, as well as a three-way interaction of victim status, life events, and satisfaction with support ($p = .062$), which

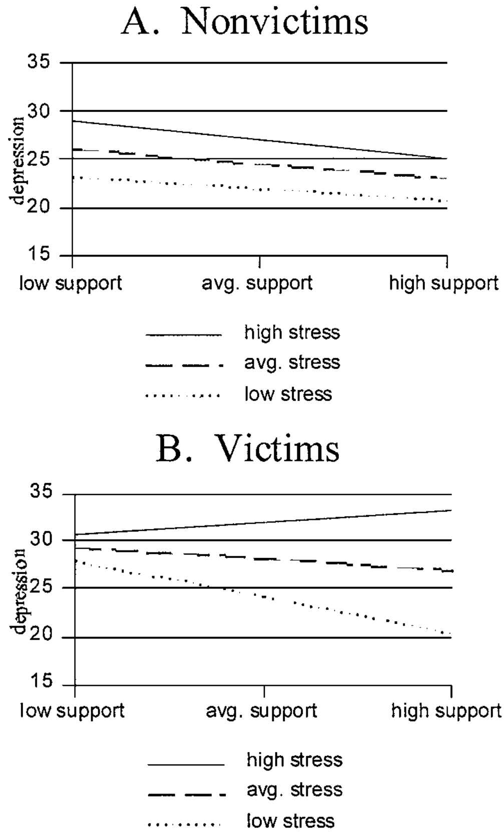

Fig. 1. Plot of regression lines representing three-way interaction of victim-status, social support, and stressful-life events with depression.

explained 1% of the variance, calling into question the main effects and lower order interactions. Thus, the three-way interaction, representing the degree to which social support buffered against depression for both victims and nonvictims given varying levels of stressful life events, was assessed.

The effects of social support on anxiety were examined when both victim status and level of stress were held constant at several levels. The three regression weights, when sexual history was held constant as nonvictimized are shown in the top half of Table IV, and plots of the regression lines are shown in Fig. 2a. As indicated, social support is significantly associated with less anxiety at average levels of stress, but not at high or low levels of stress. The three regression weights, when sexual history was held constant as victimized

Table III. Regression of Anxiety on Victim Status, Stressful Life Events, Social Support, and Interactions

	B	$SE\ B$	β	T
Step 1				
$F = 24.5^{****}$; R^2 change = .21				
Victim status	3.48	.94	.21	3.70***
Stress	.54	.08	.37	6.49****
Support	−2.24	.65	−.10	−1.903
Step 2				
F change = 5.45*; R^2 change = .01				
Victim Status × Life Stress	.43	.18	.16	2.33*
Step 3				
F change = .83 (*ns*); R^2 change = .000				
Victim Status × Satisfaction	.37	1.78	.01	.21 (*ns*)
Step 4				
F change = .3852 (*ns*); R^2 change = .002				
Stress × Support	.15	.17	.05	.88 (*ns*)
Step 5				
F change = 3.52^{+}; R^2 change = .010				
Victim Status × Stress × Support	.71	.38	.14	1.88^{+}

$^{****}p < .0001$. $^{***}p < .001$. $^{*}p < .05$. $^{+}p < .10$.

are shown in the bottom half of Table IV, and plots of the regression lines are shown in Fig. 2b. Social support is related to lower levels of anxiety at low levels of stress, but does not appear to be related to anxiety at average or high levels.

DISCUSSION

This study points to some of the difficulties that seem to accompany a history of sexual victimization in an already highly stressed sample of pregnant and parenting, minority adolescents. Although victimized adolescents reported higher levels of depression, anxiety, and life stress than the

Table IV. Regression Weights When Anxiety Regressed on Social Support Under Varying Conditions of Life Stress and Victim Status to Investigate Interaction of Victim-Status, Stressful Life Events, and Social Support

Life stress	β	$SE\ B$	B	T	Significance	Constant
Victim status: nonvictim						
Low	−1.28	1.03	−.11	−1.24	.22	13.5
Average	−1.45	.71	−.12	−2.03	.04	15.3
High	−1.62	1.17	−.14	−1.39	.17	17.1
Victim status: victim						
Low	−5.90	2.85	−.50	−2.07	.04	14.4
Average	−2.98	1.87	−.25	−1.60	.11	17.9
High	−.05	−1.69	.00	−.03	.98	21.4

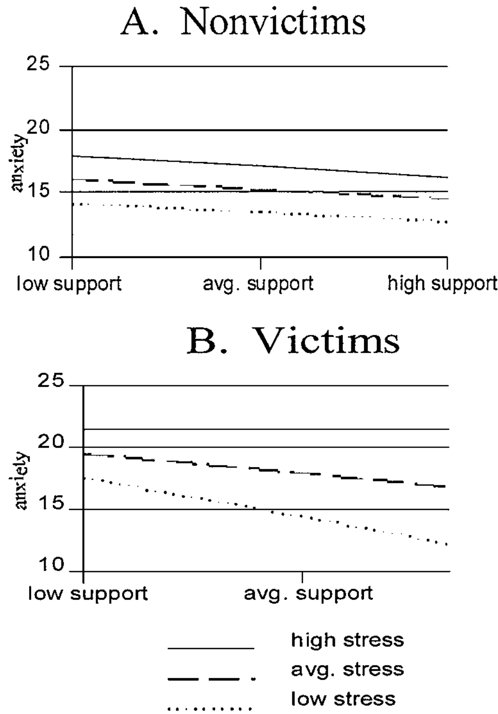

Fig. 2. Plot of regression lines representing two-way interaction of victim-status, social support, and stressful-life events with anxiety.

nonvictimized adolescents, the two groups reported similar levels of social support. This suggests that the differences in adjustment between victims and nonvictims may result from victims' inability to benefit from social support, rather than from a deficiency in the level of available support. In particular, although victims derived benefits from social support at low levels of stress, social support appears to have provided no protection against depression or anxiety at average or high levels of stress. Consistent with COR theory, these findings suggest that victimized women may benefit from support in a narrow set of circumstances but, under conditions of heightened stress, the benefits may be attenuated by the relatively poor quality of support available to them and the vulnerabilities that arise within interpersonal encounters.

For nonvictims, the associations among stress, social support, and distress are more consistent with the stress-buffering model. Social support was unrelated to either anxiety or depression at low levels of stress, but

it protected against depression and anxiety at moderate levels of stress and against depression at high levels of stress. It is possible that a threshold exists for the amelioration of anxiety in this subsample of low-income, minority, pregnant and parenting adolescents as well. It could also be argued that stressors associated with depression are more interpersonal in nature and, thus, more amenable to social support than those associated with anxiety.

Taken together, these findings suggest that distress among the victimized adolescents may be related to their heightened exposure to stress, along with their reduced capacity to benefit from their social resources in the face of higher levels of stress. Our findings are consistent with COR theory (Hobfoll, 1991) and suggest that certain adolescent mothers may only be able to benefit from support under a narrow band of stress. This possible "threshold effect" deserves further consideration and, more generally, underscores the importance of testing conceptual models of stress and social support with this population. Future research should address additional factors, such as low mastery, which may moderate the effects of victims' social support.

Of course, our exclusive reliance on self-report measures raises the possibility that participants who were willing to report sexual victimization were also more inclined to provide negative appraisals of their life events and psychosocial functioning. Future research in this area would be strengthened through the use of additional assessment techniques. Moreover, a longitudinal perspective would permit a determination of whether adolescents' prior depression and anxiety might have heightened their risk for both sexual victimization and later psychological symptoms (Boney-McCoy & Finkelhor, 1996).

It should also be noted that, although the rate of sexual victimization reported by participants in this study is comparable with rates reported in previous studies of pregnant teenagers (e.g., Bayatpour, Wells, & Holford, 1992; Medora, Goldstein, & von der Hellen, 1993), it is lower than rates reported in other studies (e.g., Boyer & Fine, 1992; Gershenson et al., 1989). This may be a partial function of our relatively conservative definition of sexual victimization, which was limited to those forms of abuse that involved actual physical contact (Finkelhor, 1994). Studies reporting higher prevalence rates have typically used a wider range of questions to tap women's memories of unwanted sexual experiences (Russell, 1984; Wyatt & Peters, 1986). Moreover, the victimized versus nonvictimized grouping was based on responses to a relatively small number of self-report items and it is quite possible that the groups would have been configured differently with alternative measures. Future research on this topic should include a more comprehensive assessment of the severity, duration, and circumstances of victimization. This would also permit grouping of women according to the degree of trauma to which they were exposed. Finally, the relatively low

response rate may be related to the sample characteristics. Sexual victimization has been associated with higher levels of school drop-out among pregnant adolescents (Boyer & Fine, 1992), and all of the women in our study were enrolled in school. Moreover, studies that have relied on samples of young African American women (e.g., Boyer & Fine, 1992; Urquiza & Goodlin-Jones, 1994) have tended to report lower rates of sexual victimization. Wyatt (1992) has argued that historical and cultural factors may converge to decrease the likelihood of African American women labeling or reporting sexually exploitive experiences or both. Future research should examine the extent to which these response rates, as well as the overall pattern of findings that emerged, generalize to other groups of victimized women.

Although we refer in this study to minority adolescents, nearly 95% of the young women were African Americans. Because Latinas constituted only 5% of the sample, caution should be taken in generalizing these findings to this or other minority groups. Additionally, the circumstances and stressors of adolescent mothers may differ from adolescents who have not yet had any children in ways that influence the meaning and effects of social support, stress, and victimization (Chen, Telleen, & Chen, 1995). Consistent with the literature, primaparous adolescents were slightly younger than the adolescent mothers (Hamburg & Dixon, 1992). They also reported more symptoms of anxiety, possibly related to concerns about their pregnancy and the anticipated delivery of a first child (Hayes, 1982). Nonetheless, victims and nonvictims were equally distributed in the two groups and there were no group differences in depression, social support, life events, educational attainment, living arrangements, or the receipt of public assistance. In light of this overall comparability, and the relatively small sample size, the primaparous participants were combined with parenting participants into a single group. The inclusion of a larger sample would have permitted separate analyses on the basis of age, parity, and other potentially relevant variables.

Beyond its implications for research and theory, this study has implications for intervention and policy. The findings regarding the prevalence and effects of sexual victimization among pregnant and parenting adolescents are particularly disturbing in light of the fact that distress during pregnancy is negatively associated with infant health outcomes (Istvan, 1990), and that postpartum distress corresponds with higher rates of child adjustment disorders (Downey & Coyne, 1990; Hammen, Burge, & Adrian, 1991) and child abuse (Boyer & Fine, 1992; Colletta, 1983; Zuravin, 1989). It is also troubling that the average age of the young women at the time of the victimization was less than 11 years old, while the average age of the perpetrators (all of whom were male) was nearly 24 years old. Greater attention should be paid to the prevention of statutory rape and more severe sanctions should be taken against perpetrators.

In addition, strategies for identifying pregnant and parenting adolescents who have been sexually victimized, and improving their access to appropriate services seem particularly important. Health and social service personnel should be trained to assess and treat sexual victimization, remaining cognizant of the fact that a sizeable proportion of their caseload may be survivors (see Musick, 1993). In light of the apparent limits of young, victimized women's support resources, providers may be in a unique position to mitigate or prevent some of the negative outcomes associated with the trauma, and help the young women to identify, establish, and better utilize their informal and formal sources of support.

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