

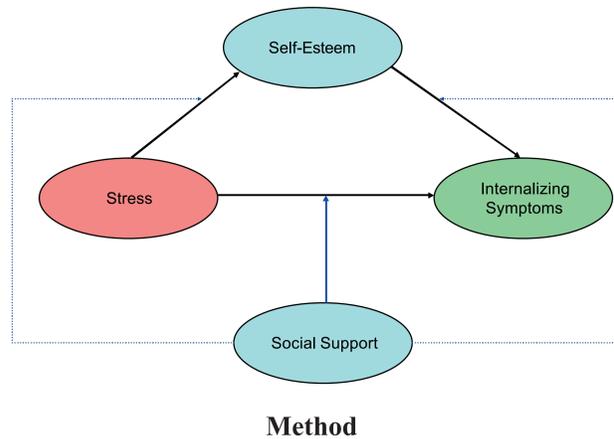
The Impact of Stress on Internalizing Symptomatology: An Examination of the Role of Self-Esteem and Social Support

Kim Davis, Felisa Brown, Krystal Hanczyk, Sofia Jankura, Teresa Coats, Krista Napolitano, Katie Raimer, Alana Eaton, Christina Ingrassia, Renee Madathil, Prasanti Phillips Roy, Taylor Smith, Erica Smuckler, Leah Tarantino, and Michael Lynch

Abstract

Stressful life events can have a significant impact on our lives. For example, stress can negatively affect self-esteem, which in turn may contribute to internalizing problems such as depression and anxiety. The purpose of the present study was to examine the relationship between stressful life events and internalizing problems, as well as the possible mediating role of self-esteem. Social support also was examined as a possible moderator of the relationship between stress and internalizing problems. Two hundred and fifty undergraduate students completed a battery of assessments measuring current feelings, stressful life events, and self-perceptions. Results identified self-esteem as a mediator of the relationship between stressful life events and internalizing symptoms. Moreover, social support was found to moderate the relationship between stress and symptoms of depression such that among those experiencing the highest levels of stress, the effects of social support in reducing depressed symptomatology were more gradual. Social support also moderated the relationship between self-esteem and anxiety. Implications of these results for understanding the effect of life stress on internalizing symptomatology are discussed.

Figure 1. Proposed Model



Method

Participants Two hundred and fifty undergraduate psychology students (73 male, 177 female) from the State University of New York at Geneseo participated in the present study. Students signed up through an online human-subjects pool and received course credit. The mean age of participants was 19.0 years (range 17 to 50). Most were freshmen (n = 134; 53.6%). A majority of the sample self-identified as Caucasian (n = 211; 84.4%).

Measures

Self-Esteem. A modified version of Rosenberg's Self-Esteem Inventory (Rosenberg, 1965) was employed. The task required participants to respond to 13 statements using a 4-point scale that measured global self-esteem.

Social support. A scale from the Protective Factors Index (Phillips & Springer, 1992) assessed the presence of caring individuals in the participant's life. Participants indicated the degree to which they agreed with statements such as "There are people I can depend on to help me if I really need it." Nine items were scored on a 4-point scale that provided an indication of social support.

Stress. Thirty items from a modified version of the Life Events Questionnaire (Masten, 1992), were used to assess exposure to stressful life events. The items provided an index of the amount of stress experienced in the past year.

Current Symptoms. Twenty-one items from the Beck Depression Inventory (BDI; Beck, 1996) assessed participants' current level of depressed symptomatology and how they were currently feeling. Nine items from the Screen for Anxiety Related Emotional Disorders (Birmaher et al., 1997) were used to measure participants' level of anxiety. A representative statement included "I worry about whether things will work out for me".

Procedure

In individual sessions, participants completed a survey packet. A trained research assistant described the project, obtained informed consent and proceeded with the self-report survey. Survey sections were explained and administered one at a time. Responses were recorded on a separate sheet of paper which contained no identifying participant information. Upon completion, participant answer sheets were placed in a sealed envelope and the participant was debriefed.

Results

Participants reported having experienced an average of 7.14 stressful life events in the past year (SD = 3.87). See Table 1 for a summary of other key variables.

Table 2 summarizes correlations among primary variables. It should be noted that participants' age was weakly correlated with anxiety and self-esteem. Gender was also found to be weakly correlated with depression and anxiety such that women reported higher levels of depression and anxiety. Women also reported higher levels of stress, and lower levels of self-esteem. Given these correlations, gender and age were statistically controlled for in subsequent analyses.

In order to determine if self-esteem mediated the effect of stressful life events on internalizing symptoms, the following set of regression analyses were conducted.

Results (continued)

The first set of analyses revealed a significant relationship between stressful life events in the past year and depression (B = .65, p < .001). Specifically, participants reporting a greater number of stressful life events also reported higher levels of depressive symptoms (see Figure 2). Second, regression analyses also revealed that stress in the past year predicted self-esteem (B = -.39, p < .003), such that individuals reporting more stressful life events during the past year had lower self-esteem. Third, when depression was regressed on both self-esteem and stressful life experiences, self-esteem predicted depression (B = -.65, p < .001). Moreover, the effect of stress was reduced when the effect of self-esteem was accounted for (B = .65 compared to B = .40). Therefore, these data suggest that self-esteem partially mediates the effect of stress on depression.

Regression analyses also revealed a significant relationship between stressful life events and anxiety (B = .45, p < .001) such that participants reporting a greater number of stressful life events also reported higher levels of anxiety (see Figure 2). As before, stress in the past year predicted self-esteem (B = -.39, p < .003). Finally, when anxiety was regressed on both self-esteem and stressful life experiences, self-esteem predicted anxiety (B = -.53, p < .001). Moreover, the effect of stress was reduced when the effect of self-esteem was accounted for (B = .45 compared to B = .24). Taken together, analyses predicting both anxiety and depression confirm the role of self-esteem as a partial mediator of the relationship between stressful life events and internalizing symptoms.

We also examined whether social support moderated the relationship among these variables. Results indicated a significant interaction between stressful life events and social support (B = -.06, p < .01) in predicting self-esteem (see Figure 3). Additionally, there was a significant interaction between self-esteem and social support in predicting anxiety (B = -.03, p < .001) such that participants who reported the highest levels of self-esteem and social support reported the lowest levels of anxiety symptoms (see Figure 4). The interaction between self-esteem and social support was not significant in predicting depression.

Finally, social support moderated the relationship between stress and symptoms of depression (B = .07, p < .003), such that among those experiencing the highest levels of stress, the effects of social support in reducing depressed symptomatology are more gradual (see Figure 5). The interaction of stress and social support in predicting anxious symptomatology was not significant.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Self Esteem	250	19	56	44.01	7.695
Social Support	250	16	36	33.34	4.115
Stress (past year)	250	0	24	7.14	3.872
Depression	250	0	41	11.22	7.572
Anxiety	250	16	50	34.94	7.187

Table 2: Correlations

	Age	Gender M=-1 F=1	Depression	Anxiety	Stress (past year)	Self Esteem	Social Support
Age	1	.099	-.080	-.121	.004	.118	.003
Gender		1	.117	.105	.115	-.124	.012
Depression			1	.559**	.341**	-.702**	-.497**
Anxiety				1	.250**	-.599**	-.253**
Stress (past year)					1	-.208**	-.154*
Self Esteem						1	.556**
Social Support							1

Figure 2

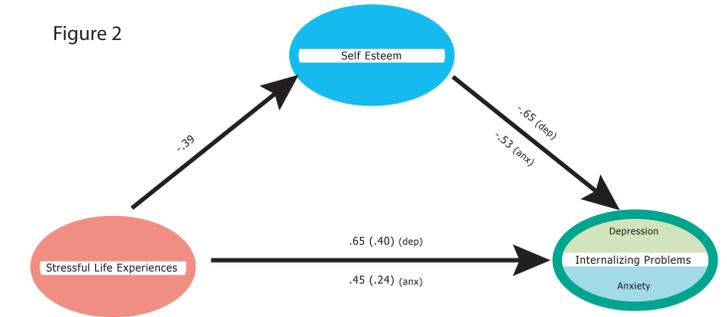


Figure 3

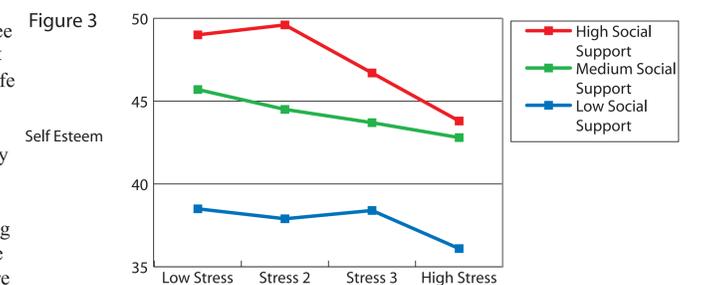


Figure 4

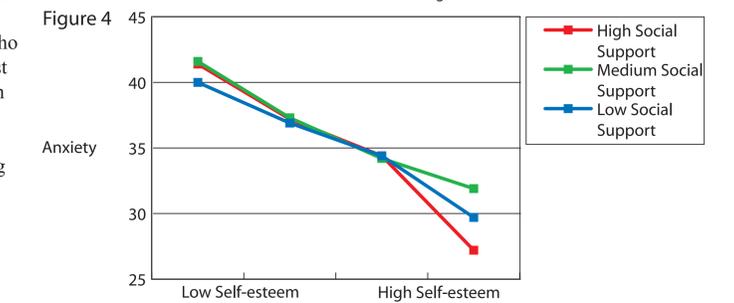
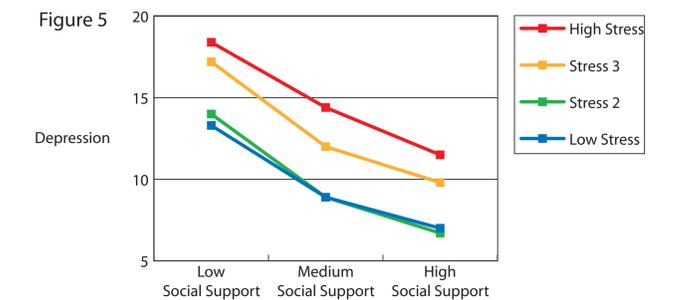


Figure 5



Discussion

Results from this study confirmed most of the hypotheses generated from our model (see Figure 1).

➤ Stress was associated with increased levels of internalizing symptoms.

- The data showed both **direct effects** of stress on symptomatology as well as **indirect effects**.

➤ Self-esteem acted as a mediator of the effects of stress.

- Self-esteem played a specific role in **mediating the indirect effects** of stress on both depression and anxiety.

➤ Social support acted as a moderator of these effects.

- Social support had **two different roles** in this sample.
- Social support played a role in the **direct pathway** linking stress and **depression**.
- Conversely, social support played a role in the **mediated pathway** linking stress and **anxiety**.