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Emotional Avoidance and Social Support Interact to Predict Depression Symptom Severity One Year After Traumatic Exposure

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Abstract

Individuals exposed to a traumatic event commonly develop symptoms of depression, a psychiatric disorder associated with a number of negative clinical and public health consequences. Both intrapersonal and interpersonal risk factors have been associated with heightened risk for depression following traumatic event exposure; however, less is known about how these risk factors may interact to predict trauma-exposed individuals' risk of subsequently developing depression symptoms. This study examined the interactive influence of emotional avoidance (an intrapersonal risk factor) and perceived social support (an interpersonal risk factor) on the development of depression symptoms over a one-year period among $N = 46$ individuals recruited shortly after visiting a hospital emergency department for treatment following exposure to a traumatic event. Results revealed a significant main effect of emotional avoidance on 12-month depression symptoms. The main effect was qualified by an emotional avoidance by perceived social support interaction: the relation of emotional avoidance to 12-month depression symptoms was positive and significant only for individuals with low levels of perceived social support. Results highlight the need to consider both intrapersonal and interpersonal risk factors, as well as their interaction, when predicting which individuals may be most at risk to develop depression following traumatic event exposure.

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Keywords

Depression; traumatic event; emotional avoidance; social support

1. Introduction

As many as 89% of adults report exposure to a traumatic event in their lifetime (Kilpatrick, et al., 2013). Although posttraumatic stress disorder (PTSD) is often examined as a consequence of traumatic exposure (Kessler, et al., 2017), traumatic events can also increase risk for the development of other psychiatric conditions, particularly depression. Heightened rates of depression have been observed among survivors of a variety of traumatic events, including military combat, natural disasters, terrorist attacks, and interpersonal violence (Bonde, et al., 2016; Dworkin, et al., 2017; Tang, et al., 2014). Given that depression is associated with numerous negative health outcomes, including significant impairment in work and social relationships, greater healthcare utilization, and heightened risk for suicidal ideation and behavior (Kessler, et al., 1999; Kessler, et al., 2005; Schousboe, et al., 2019), there is a need to identify factors that increase vulnerability for the development of depression following exposure to a traumatic event. Such research can highlight factors that could be targeted in early interventions for individuals with recent traumatic event exposure.

To date, researchers have identified a number of intrapersonal and interpersonal vulnerability factors for the development of depression following stressful and/or traumatic events. Age, socioeconomic status, marital status, trauma type, exposure to previous traumatic events (including interpersonal violence in childhood), and additional stressful life events following the index traumatic event have been associated with more severe depression symptoms in the aftermath of traumatic exposure (Kilpatrick, et al., 2003; Person, et al., 2006; Weiss, et al., 1999). Cognitive vulnerability factors have also been found to predict depression following exposure to a traumatic event. Specifically, Nolen-Hoeksema and Morrow (1991) found that pre-traumatic trait rumination was associated with greater severity of depression symptoms 7 weeks after exposure to a natural disaster. Likewise, rumination, self-devaluation, and negative self-evaluation assessed soon after the experience of a motor vehicle accident were associated with more severe depression symptoms 2-weeks, 1 month, 3 months, and 6 months later (Ehring, et al., 2008). In addition to these person-level risk factors, certain characteristics of an individual's interpersonal environment have also been associated with the development and maintenance of depression after traumatic exposure. For example, low perceived social support is a well-established risk factor for depression (Garipey, et al., 2016; Stice, 2014; Wade & Kendler, 2000), and has been associated with the worsening of depression over time among trauma-exposed paramedics (Wild, et al., 2016) and survivors of motor vehicle accidents (Ehring, et al., 2008).

These findings on intra- and interpersonal risk factors for depression following a traumatic event provide insight into specific vulnerabilities that may predispose individuals to develop depression in the aftermath of traumatic exposure. However, there has been a relative dearth of research examining how intrapersonal and interpersonal risk factors may work in combination to confer risk for, or protect against, the development of depression following

exposure to a traumatic event. Knowledge of the interplay of intrapersonal and interpersonal risk factors could aid in the early identification of patients who are at particularly high risk for negative outcomes following traumatic exposure. Furthermore, understanding how these factors work together could aid in the development of personalized early interventions based on the unique characteristics of individual patients and their social environments. Thus, in the present study, we sought to understand the interactive influence of emotional avoidance (an intrapersonal risk factor) and perceived social support (an interpersonal risk factor) on the development of depression symptoms over a one-year period among individuals presenting to the emergency department (ED) for treatment following exposure to a traumatic event.

Emotional avoidance can be conceptualized as a form of experiential avoidance (Chawla & Ostafin, 2007; Hayes, et al., 1996) that involves the avoidance or attempted control of emotional experiences that are perceived to be aversive and/or threatening. Emotional avoidance has been associated with depression symptoms in general (Kahn & Garrison, 2009), as well as among individuals exposed to a traumatic event (Hassija, et al., 2012). Moreover, the strategic withholding of emotions, including positive emotions, has been associated with greater depression severity among combat veterans (Roemer, et al., 2001). Relatedly, the acceptance of emotions (i.e., the opposite of emotional avoidance) has been associated with less severe depression symptoms during times of high life stress (Shallcross, et al., 2010).

The experience of a traumatic event is often accompanied by intense negative emotional experiences, such as fear, shame, anger, and sadness (Rizvi, et al., 2008). Emotional avoidance-oriented coping strategies, such as suppression and strategic withholding of emotions, may reduce emotional distress in the short-term. However, the avoidance of painful internal experiences is often paradoxically associated with increases in emotional distress over time (Hayes, et al., 1996). In addition to heightened negative emotionality, emotional suppression can also contribute to attenuated positive emotionality (Gross, 2013). Heightened negative emotionality and attenuated positive emotionality may operate together to increase risk for depression, given that both have been identified as central features underlying depressive symptomatology (Bylsma, et al., 2008; Clark & Watson, 1991).

As previously discussed, low social support has also been identified as a risk factor for depression following traumatic exposure (Wild, et al., 2016). However, less is known about the specific contexts in which low social support may be problematic. It is possible that the impact of intrapersonal vulnerability factors, such as emotional avoidance, on negative outcomes may be stronger for individuals with low perceived social support given a lack of social resources to facilitate adaptive emotional processing of trauma-related experiences and emotions. In other words, a lack of social support may facilitate or exacerbate emotional avoidance if an individual has few opportunities to process emotions related to a traumatic experience with supportive others, ultimately increasing risk for depression. Alternatively, intrapersonal vulnerability factors such as emotional avoidance could increase the likelihood that individuals will isolate themselves from sources of social support following a traumatic event, perhaps in effort to avoid conversations that might pertain to the traumatic event or trauma-related emotions.

The present study tested the hypothesis that emotional avoidance and perceived social support assessed soon after the experience of a traumatic event would interact to predict the severity of depression symptoms one year later within a sample of individuals presenting to hospital emergency departments (EDs) for treatment following exposure to a traumatic event. It was expected that individuals with high levels of emotional avoidance and low perceived social support would report the most severe depression symptoms at one-year follow-up.

Given high rates of co-occurrence between MDD and PTSD (Breslau, et al., 2000; Kessler, et al., 1995; Pietrzack, et al., 2011) and previous research linking emotional avoidance (Naifeh, et al., 2012; Tull, et al., 2011) and low perceived social support (Baranyi, et al., 2010; Guay, et al., 2006) to the development of PTSD symptoms following traumatic event exposure, we were also interested in whether emotional avoidance and perceived social support might interact to predict the severity of 12-month PTSD symptoms. To our knowledge, no previous studies have examined the interaction of emotional avoidance and perceived social support on the development of PTSD symptoms following exposure to a traumatic event. These analyses were considered exploratory and no specific hypotheses were made.

2. Method

2.1 Participants

Adult participants ($N = 46$; 65% female) were recruited from two hospital EDs in a mid-size Midwestern city. One ED was located in an urban tertiary care center, and the other was located in an academic medical center. Participants were recruited within 48 hours after presentation to the ED for treatment following exposure a traumatic event as part of a larger, ongoing longitudinal study of neural and environmental predictors of the development of PTSD following traumatic event exposure. Participants were excluded from the larger study if they were pregnant, under the influence of alcohol or drugs at the time of the traumatic event, or had moderate to severe traumatic brain injury or any major medical illness affecting general health. Most participants were African American (59%) or White (37%), and a majority were admitted to the ED for a motor vehicle accident (50%) or physical assault (44%). Additional demographic information is presented in Table 1.

2.2 Measures

Avoidance of emotions at baseline (Time 0) was assessed using the Emotional Avoidance Questionnaire (EAQ; Taylor, et al., 2004). The EAQ is a 20-item measure that assesses the avoidance of positive emotions (e.g., “If I start feeling strong positive emotions, I prefer to leave the situation”), the avoidance of negative emotions (e.g., “If I ignore negative emotions, they will go away”), negative beliefs about emotions (e.g., “I cannot handle feeling anxious or worried about things”), and social concerns about displaying emotions (e.g., “I try to keep feelings of anxiety or worry to myself so that other people don’t think less of me”). Only the avoidance of positive emotions and avoidance of negative emotions subscales were utilized in this study. Each item is rated on a 5-point Likert scale (1 = Not True of Me; 3 = Neither True/Untrue of Me; 5 = Very True of Me). Item-level scores were

summed to create a total EAQ score, so that higher scores reflect higher levels of emotional avoidance. The EAQ has been found to have adequate psychometric properties in both clinical and nonclinical samples (Taylor, et al., 2004). The EAQ has also been found to associate with the severity of anxiety and PTSD symptoms (Naifeh, et al., 2012). Internal consistency for the present sample was in the good range ($\alpha = .85$).

Perceived social support at Time 0 was evaluated by using a 4-item version of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, et al., 1990). Items assess the perceived availability of social support (e.g., “There is a special person who is around when you are in need”) and are rated on a 7-point Likert scale (1 = Very strongly disagree; 4 = You are neutral; 7 = Very strongly agree). Item responses were summed so that higher scores on the measure indicate higher levels of perceived social support. The MSPSS demonstrates strong psychometric properties (Zimet, et al., 1990), and the 4-item version has been used in previous studies that have examined perceived social support among traumatic event survivors (Wang et al., 2016). Internal consistency for the present sample was excellent ($\alpha = .95$).

The 16-item Quick Inventory of Depressive Symptomatology (QIDS-SR; Rush, et al., 2003) assesses symptoms of depression, including low mood, anhedonia, difficulties with sleep, appetite, energy level, concentrating, psychomotor functioning, and self-esteem, and thoughts of death and/or suicide. Each item is rated on a 0–3 scale, and item-level responses were summed to create a total QIDS score so that higher scores reflect more severe depression symptoms. The QIDS has been found to demonstrate strong psychometric properties, including high concurrent validity with other standard measures of depression symptoms (Reilly, et al., 2015). Internal consistency for the present sample was in the acceptable range ($\alpha = .75$).

The 20-item PTSD Checklist-Stressor Specific (PCL-5; Weathers, et al., 2013) was used to assess the severity of DSM-5 PTSD symptoms related to the index traumatic event. Response options range from 0 (Not at all) to 4 (Extremely). Item-level responses were summed to create a total score, and scores for the total measure range from 0 to 80. The PCL-5 has been found to demonstrate strong test-retest validity, as well as convergent and discriminant validity, in a variety of traumatic event-exposed samples (Blevins et al., 2015). A score of 33 has been recommended as a clinical cutoff for probable PTSD (Bovin, et al., 2016; Weathers, et al., 2013). Internal consistency in the present sample was excellent ($\alpha = .90$).

2.3 Procedure

All study procedures were approved by the Institutional Review Boards of the participating institutions. Participants provided written informed consent within several days after their ED visit. Participants then completed the initial post-traumatic event (Time 0) questionnaires, including a survey of demographic information, the EAQ, the MSPSS, and the QIDS-SR, within two weeks of the index traumatic event. Follow-up questionnaires, including the QIDS-SR and PCL-5, were mailed to participants at their home address approximately 12 months after the traumatic event. Some participants completed the 12-month questionnaires in their homes, and others completed the questionnaires in the

laboratory following completion of a 12-month follow-up interview as part of the larger ongoing study.

2.4 Analysis plan

Pearson product-moment correlations were used to assess zero-order relations between study variables. To test our hypothesis that the relation between emotional avoidance and 12-month depression symptoms was conditional depending on level of perceived social support, we conducted regression models with Time 0 perceived social support and Time 0 emotional avoidance as predictors, and depression symptoms at 12 months as the criterion variable. We included Time 0 depression symptoms as a covariate in all analyses to account for the influence of depression symptoms at the time of the trauma. The type of traumatic event (represented as a dichotomous variable of interpersonal traumatic event versus other types of events [motor vehicle accident, serious accident/fall, and other traumatic exposure]) was also included as a covariate in all analyses, given that interpersonal traumatic events have been associated with particularly high risk for the development of depression following traumatic event exposure (Kilpatrick et al., 2003). Analyses were conducted using PROCESS (Model 1; Hayes, 2013). The Johnson-Neyman regions of significance analysis (Johnson & Neyman, 1936) was planned to follow up on the hypothesized interaction. In addition, the pick-a-point technique (Rogosa, 1980) at the MSPSS mean and one standard deviation above and below the mean was planned to provide a visual depiction of the interaction. Additionally, to examine the relations of Time 0 social support and Time 0 emotional avoidance to PTSD symptoms at one-year follow-up, the analyses described above were repeated with 12-month PTSD symptoms as the criterion variable. Time 0 PTSD symptoms and trauma type were included as covariates in these analyses.

3. Results

3.1 Preliminary analyses

Descriptive statistics for the primary variables of interest are presented in Table 2. All continuous primary study variables were within acceptable ranges for skewness and kurtosis (Curran, et al., 1996), so no transformations were applied. Intercorrelations between primary variables of interest are presented in Table 3.

3.2 Primary analyses

Results of regression analyses are presented in Table 4. Results revealed a significant main effect of Time 0 emotional avoidance on 12-month depression symptoms, such that higher levels of emotional avoidance at Time 0 were associated with higher levels of depression symptoms 12-months later. No main effect was observed for perceived social support at Time 0. The main effect of emotional avoidance was qualified by a significant emotional avoidance by perceived social support interaction. These findings indicate that perceived social support moderated the relation between emotional avoidance and 12-month depression symptoms.

The Johnson-Neyman regions of significance analysis revealed that emotional avoidance was significantly associated with 12-month depression symptoms when perceived social

support scores were low, with scores less than or equal to 18.24 (40% of perceived social support scores fell within this range). The pick-a-point follow-up analysis revealed a significant conditional relationship between emotional avoidance and 12-month depression symptoms when perceived social support scores were held to one standard deviation below the mean (9.85), β (SE) = .33 (.12), $t = 2.72$, $p = .010$, 95% CI = .0858, .5767. There was not a significant conditional relationship between emotional avoidance and 12-month depression symptoms when perceived social support scores were held at the mean (18.47), β (SE) = .15 (.08), $t = 1.97$, $p = .056$, 95% CI = -.0044, .3102, or at one standard deviation above the mean (27.10), β (SE) = -.03 (.11), $t = -.23$, $p = .820$, 95% CI = -.2508, .1999. Predicted values of 12-month depression symptoms as estimated by the pick-a-point follow-up analysis are presented in Figure 1.

Regarding the influence of Time 0 emotional avoidance and perceived social support on 12-month PTSD symptoms (when controlling for Time 0 PTSD symptoms and type of traumatic event), results revealed significant main effects of emotional avoidance and perceived social support on the severity of PTSD symptoms at one-year follow-up. There was also a significant interaction of emotional avoidance and social support on 12-month PTSD symptoms (see Table 5). The Johnson-Neyman regions of significance analysis revealed that emotional avoidance was significantly associated with 12-month PTSD symptoms when perceived social support scores were low to moderate, with scores less than or equal to 20.78 (57% of social support scores fell within this range).

4. Discussion

Results supported the hypothesis that perceived social support and emotional avoidance assessed in the aftermath of a traumatic event would interact to predict the severity of depression symptoms one year later. A significant main effect was observed for Time 0 emotional avoidance predicting 12-month depression symptoms, indicating that emotional avoidance may be an independent risk factor for depression following exposure to a traumatic event. Conversely, no main effect was observed for Time 0 perceived social support. This indicates that perceived social support in isolation does not predict depression symptoms at 12-months.

However, the observed main effect was qualified by a significant perceived social support by emotional avoidance interaction. Specifically, results indicated that perceived social support moderated the relation of Time 0 emotional avoidance to 12-month depression symptoms. Follow-up analyses indicated that Time 0 emotional avoidance was only a significant predictor of 12-month depression symptoms for individuals whose perceived social support fell in the lowest 40% of scores. Time 0 emotional avoidance was not a significant predictor of 12-month depression when social support scores were held at the mean, or at one standard deviation above the mean. In other words, Time 0 emotional avoidance only predicted 12-month depression symptoms for individuals with lower-than-average social support. Notably, these findings remained significant when trauma type and depression symptoms at the time of the initial assessment were covaried.

The observed main effect of emotional avoidance on 12-month depression symptoms is consistent with previous research demonstrating associations between emotional avoidance and depression among individuals exposed to a traumatic event (Hassija, et al., 2012), as well as research on the relevance of intrapersonal risk factors for depression following traumatic exposure (Ehring, et al., 2008). Few studies have examined emotional avoidance as a risk factor for depression specifically (although the broader construct of experiential avoidance has been associated with depression symptom severity [Cribb, et al., 2006; Plumb, et al., 2004; Tull, et al., 2004]), so results of this study add to growing literature on emotional avoidance as a transdiagnostic risk factor within the affective disorders (Kring, 2008).

Although theoretical and empirical literature supports a link between emotional avoidance following traumatic exposure and emotional processes relevant to depression (i.e., heightened negative emotionality and attenuated positive emotionality; Belbo, et al., 2012; Gilboa-Schechtman & Foa, 2001; Plumb, et al., 2004), results of this study indicate that emotional avoidance is a significant predictor of depression symptoms 12-months after exposure to a traumatic event only for individuals with low, but not medium or high, levels of perceived social support. There are several possible explanations for these results. One explanation is that low perceived social support may give rise to greater emotional avoidance. Individuals who have few perceived social support persons at the time of a traumatic event may have limited opportunities to talk about experiences and emotions related to a traumatic event with supportive others. As a result, trauma-related emotions may be perceived as overwhelming and unmanageable, and individuals may engage in efforts to avoid those emotions. Heightened emotional avoidance, in turn, may facilitate the development of depression symptoms over time.

Another possible explanation is that individuals with heightened emotional avoidance in the aftermath of a traumatic event may withdraw from existing social relationships out of a desire to avoid discussions of experiences or emotions related to the traumatic event. The deleterious effects of social withdrawal are likely to be more marked for individuals who already have fewer perceived social support persons at the time of the traumatic event. In other words, withdrawing from social relationships is likely to have more of a negative impact on individuals who have few perceived social supports to begin with, compared to individuals with a broader network of perceived social support persons. As noted above, limited opportunities to process trauma-related emotions in the context of supportive social relationships may give rise to emotional avoidance, which in turn may lead to increases in depression symptoms over time.

Furthermore, the negative consequences of heightened emotional avoidance and low perceived social support may compound over time. For example, an individual who has few perceived social support persons in the aftermath of a traumatic event may engage in emotional avoidance due to a lack of supportive individuals with whom to discuss trauma-related emotions and experiences. This increase in emotional avoidance might prompt the individual to withdraw from their (limited) perceived social support persons, which in turn may bring about further increases in emotional avoidance and depression symptoms.

Heightened depression symptoms may consequently bring about further increases in emotional avoidance and social withdrawal, and so on.

These results are preliminary, and additional research is needed to elucidate the mechanisms through which emotional avoidance and perceived social support interact to influence depression following traumatic event exposure. Given that the relations between high emotional avoidance, low social support, and depression symptoms may be iterative and/or mutually reinforcing over time, future research using repeated observations of these variables and data analysis strategies such as autoregressive latent trajectory modeling may shed light on the time ordering of these effects. Nonetheless, these results (if replicated) suggest that the assessment of emotional avoidance and perceived social support may aid in identification of individuals that could benefit from early intervention to prevent the onset or worsening of depression following traumatic event exposure.

Though the present study was primarily focused on the influence of intrapersonal and interpersonal risk factors on the development of depression symptoms following exposure to a traumatic event, it bears mentioning that there was also a significant interaction of emotional avoidance and perceived social support on PTSD symptoms at one-year follow-up. Combined with our other findings, these results suggest that the risk associated with the interplay between emotional avoidance and perceived social support may not be unique to depression. Instead, emotional avoidance and low perceived social support may represent transdiagnostic risk factors for the development of psychopathology following traumatic exposure. These results are also consistent with previous research demonstrating the influence of heightened emotional avoidance (Naifeh, et al., 2012; Tull, et al., 2011) and low perceived social support (Baranyi, et al., 2010; Guay, et al., 2006) on the severity of PTSD symptoms following traumatic exposure. Future research in this area would benefit from further exploration of intrapersonal and interpersonal risk factors that may confer risk for both PTSD and depression following exposure to a traumatic event, particularly given that co-occurring PTSD and MDD are associated with higher levels of distress, impairment, and healthcare utilization compared to either disorder alone (Rytwinski, et al., 2013). The identification of risk factors that may predict the development of co-occurring PTSD-MDD disorders may highlight particularly relevant targets for early post-trauma interventions.

Strengths of this study include the use of a recently traumatized sample recruited from multiple hospital EDs and a longitudinal design that allowed for follow-up assessments of symptoms over a 12-month period. And yet, the study has limitations that should be considered when interpreting the findings. A key limitation is that perceived social support was assessed using a brief self-report measure (the MSPSS), which may be vulnerable to individual differences in perceptions of social support. Moreover, the MSPSS does not allow for fine-grained assessment of the type and quality of perceived social support. Although low perceived social support has been identified as a risk factor for the development of depression and PTSD following exposure to a traumatic event (Baranyi, et al., 2010; Guay, et al., 2006; Wild, et al., 2016), there are certain contexts in which higher levels of social support may not be beneficial, such as when social support persons encourage the use of maladaptive strategies for coping with trauma-related distress. For example, a recent study of undergraduate sexual assault survivors (Dworkin, et al., 2018) found that the relation

between perceived social support from friends and (less severe) later PTSD symptoms was weaker for individuals who reported higher levels of substance use coping, compared to individuals who reported less substance use coping. The authors suggest that peer encouragement to engage in substance use coping could contribute to a weaker relationship between social support and (less severe) later PTSD symptoms.

Additionally, negative reactions to disclosures about traumatic events from social support persons have been associated with (more severe) subsequent PTSD symptoms (Littleton, 2010; Ullman & Peter-Hagene, 2014), so it is possible that even high levels of perceived post-traumatic social support may have deleterious effects when reactions from social support persons to disclosures about a traumatic event are critical, minimizing, or invalidating. Future research in this area would benefit from more thorough investigation of how the nature and quality of perceived social support may influence the development of psychiatric symptoms following traumatic event exposure. Additionally, in order to address the potential influence of individual biases in perception of social support, future studies would benefit from the inclusion of objective social support measures, such as the number of visitors a patient has in the ED.

Other limitations include the use of a relatively small sample size, as well as the assessment of depression and PTSD symptoms using self-report measures, rather than clinical interviews. Future studies in this area would benefit from the use of clinical interviews, which would allow for assessment of the presence or absence of an MDD and/or PTSD diagnosis. Finally, the majority of participants in this study experienced either a motor vehicle accident or physical assault, so the extent to which these results are generalizable to individuals exposed to other types of trauma is not clear. Future research in this area would benefit from examining the interactive effect of emotional avoidance and perceived social support on the development of depression in other traumatic event-exposed populations, such as combat veterans and survivors of sexual assault.

To our knowledge, this is the only prospective study to examine the interactive effect of emotional avoidance and perceived social support on the development of depression symptoms among individuals with recent traumatic exposure. Results suggest that these factors interact to predict depression symptoms one year after a traumatic event, and highlight the need to consider both intra- and interpersonal risk factors, as well as their interaction, when predicting which individuals may be at highest risk for developing depression following traumatic exposure. Moreover, these results suggest that both emotional avoidance and perceived social support could be important targets for early post-traumatic interventions. Specifically, brief interventions focused on increasing acceptance of distressing trauma-related emotions, as well as increasing access to persons that individuals perceive to be supportive, in the immediate aftermath of a traumatic event may be efficacious in preventing the development of depression and associated negative outcomes. Given that even moderate levels of perceived social support appear to protect against the development of depression following a traumatic event, there may be particular utility in planning for utilization of social support and integration of key support people into follow-up care even before a trauma-exposed individual leaves the ED.

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Highlights

- Emotional avoidance predicts depression severity 12-months after traumatic exposure
- High emotional avoidance with low social support predicts most severe depression
- Low social support is a risk factor for depression following traumatic exposure

Figure 1.

Interactive Effect of Post-Trauma Emotional Avoidance and Perceived Social Support on 12-Month Depression Symptoms

Note. Time 0 depression symptoms and trauma type were included as a covariate in all analyses. The relation of Time 0 emotional avoidance to 12-month depression symptoms was positive and significant for individuals with perceived social support scores held 1 standard deviation below the mean. The relation of Time 0 emotional avoidance to 12-month depression symptoms was positive and nonsignificant for individuals with perceived social support scores held at the mean. The relation of Time 0 emotional avoidance to 12-month depression symptoms was negative and nonsignificant for individuals with perceived social support scores held 1 standard deviation above the mean.

Table 1.

Demographic Characteristics of Sample

	Mean [SD] / %
Age (Range, Mean [SD])	35.61 (10.94)
Gender	
% Female	65
% Male	35
Race	
% White	37
% Black/African American	59
% Multiracial	2
% Other	2
Index Trauma	
% Motor Vehicle Accident	50
% Physical Assault	44
% Serious Accident/Fall	2
% Other	4

Table 2.

Descriptive Statistics for Primary Study Variables

	Range	<i>M</i> / %	<i>SD</i>	Skewness	Kurtosis
1. Time 0 Depression	5–23	13.96	4.89	.18	–.78
2. Time 0 PTSD	28–78	50.68	14.73	.17	–1.27
2. Time 0 Emotional Avoidance	10–48	27.44	9.61	.11	–.61
3. Time 0 Perceived Social Support	4–28	18.60	8.60	–.46	–1.25
4. Trauma Type (% IPT)		43.50			
5. 12-Month Depression	2–27	10.07	5.76	.87	.48
6. 12-Month PTSD	0–76	28.18	21.42	.63	–.23

Note. PTSD = Posttraumatic Stress Disorder. IPT = Interpersonal traumatic event.

Table 3.

Intercorrelations between Primary Study Variables

	1	2	3	4	4	6	7
1. Time 0 Depression	--						
2. Time 0 PTSD	.49 [*]	--					
3. Time 0 Emotional Avoidance	-.11	.002	--				
4. Time 0 Perceived Social Support	.09	.03	-.01	--			
5. Trauma Type	.14	.25	-.11	.004	--		
6. 12-Month Depression	.52 [*]	.30 [*]	.14	-.11	.18	--	
7. 12-Month PTSD	.18	.44 [*]	.31	-.02	.07	.75 [*]	--

^{*}
p < .001

Note. PTSD = Posttraumatic Stress Disorder.

Table 4.

Main and Interactive Effects of Post-Traumatic Emotional Avoidance and Perceived Social Support on 12-Month Depression Symptoms

	β (SE)	<i>t</i>	<i>P</i>	95% CI
Time 0 Emotional Avoidance	.54 (.21)	2.58	.014	.1153, .9548
Time 0 Perceived Social Support	.54 (.31)	1.72	.093	-.0946, 1.1728
Time 0 Emotional Avoidance x Time 0 Perceived Social Support	-.02 (.01)	-2.06	.047	-.0410, -.0003
Trauma Type	1.00 (.83)	1.21	.236	-.6800, 2.6743
Time 0 Depression	.71 (.15)	4.58	<.001	.3935, 1.0186

Table 5.

Main and Interactive Effects of Post-Traumatic Emotional Avoidance and Perceived Social Support on 12-Month PTSD Symptoms

	β (SE)	<i>t</i>	<i>P</i>	95% CI
Time 0 Emotional Avoidance	3.45 (.86)	4.01	.001	1.6719, 5.2579
Time 0 Perceived Social Support	4.01 (1.22)	3.28	.003	1.4739, 6.5391
Time 0 Emotional Avoidance x Time 0 Perceived Social Support	-.13 (.04)	-3.37	.003	-.2181, -.0518
Trauma Type	-1.85 (3.87)	-.48	.638	-9.8635, 6.1704
Time 0 PTSD	.77 (.22)	3.50	.002	.3155, 1.2299

Note. PTSD = Posttraumatic Stress Disorder.