

An Exploratory Study of Vicarious Trauma Among Therapist Trainees

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The current study explored vicarious trauma among therapist trainees in relation to history of trauma, experience level, trauma-specific training, and defense style. Students in graduate clinical and counseling psychology training programs ($N = 129$) completed the Trauma Symptom Inventory, Defense Style Questionnaire, and an experience questionnaire. Results indicated trauma symptoms were significantly associated with defense style, which appeared to moderate personal trauma history and experience level. Trauma-specific training was also independently related to trauma symptoms. Notably, over half the sample reported a self-sacrificing defense style, which was a risk factor for vicarious trauma. Training implications of the findings are discussed.

Keywords: vicarious trauma, defense style, trauma history, therapist, trainee

In the last decade, the mental health field has devoted increasing attention to the potentially harmful impact of working closely with traumatized individuals. A growing body of literature explores the theoretical and clinical implications of trauma work and empirical evidence is beginning to emerge documenting its negative psychological effects among help-givers, including disaster relief workers, police and medical personnel, and mental health professionals (Follette, Polusney, & Milbeck, 1994; Sloan, Rozensky, Kaplan, & Saunders, 1994; Weiss, Marmar, Metzler, & Ronfeldt, 1995). Recent studies examining possible risk factors for vicarious trauma among clinicians have reported associations of secondary trauma symptoms with personal history of trauma and experience level (Chrestman, 1999; Pearlman & Mac Ian, 1995). Pearlman and Saakvitne (1995) also suggested that the lack of formal trauma coursework and maladaptive defense styles among therapists may create a vulnerability to trauma-related symptomatology. Although many practitioners' first applied experience with trauma clients occurs during practicum training in graduate school and evidence suggests that novice therapists are more likely to experience difficulties (Pearlman & Mac Ian, 1995), empirical investigations of vicarious trauma among graduate students in clinical and counseling psychology programs are lacking. The

current study specifically examined the association of vicarious trauma symptoms to personal history of trauma, applied experience level, trauma-specific training, and further explored the potential interaction of these variables with defense style.

Vicarious Traumatization

Various terms have been used to describe the stress resulting from helping a traumatized person, including "secondary traumatic stress," "compassion fatigue," (Figley, 1995, 1999) and "vicarious traumatization/trauma" (Pearlman & Saakvitne, 1995; Schauben & Frazier, 1995). Wilson and Lindy (1994) described this experience as a form of posttraumatic stress disorder (PTSD) among therapists, who without direct exposure to a traumatic event will display symptoms almost identical to those of PTSD. Herman (1997) referred to this response as traumatic countertransference, from which the therapist experiences the same terror, rage, and anguish as the patient, albeit to a lesser degree.

Following Pearlman and Saakvitne (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995; Saakvitne, 1996; Saakvitne & Pearlman, 1996), the current study conceptualizes vicarious trauma as a process involving a transformation in the inner experience of the therapist resulting from empathic engagement with clients' traumatic material. Whereas countertransference is present in all therapeutic relationships with dynamics unique to each therapist-client dyad, vicarious traumatization is a cumulative consequence not specific to any one client, which can be lasting and linked to multiple aspects of the therapist's personal and professional life (Saakvitne, 1996). Taxing psychological effects can interfere with the therapist's adaptive assumptions of personal security and a meaningful world (Chrestman, 1999; Kassam-Adams, 1999), increasing the likelihood of a protective numbing reaction to feelings of pain and loss (Saakvitne, 1996).

Posttraumatic symptoms typically assessed by researchers to determine the presence of vicarious traumatization include suspiciousness, anxiety, depression/sadness, somatic symptoms, intrusive thoughts and feelings, avoidance, emotional numbing and flooding, and increased feelings of personal vulnerability (Neumann & Gamble, 1995; Pearlman & Mac Ian, 1995; Steed & Downing, 1998). How-

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ever, the effects of vicarious traumatization vary greatly and may depend on personal factors and training or experience level (Pearlman & Saakvitne, 1995; Way VanDeusen, Martin, Applegate, & Jandle, 2004). For example, the theoretical literature suggests that therapists with a personal history of trauma may be more vulnerable to the impact of working with trauma survivors than therapists without such history (Figley, 1999; Pearlman & Saakvitne, 1995; Ryan, 1999). However, empirical findings regarding this relationship are mixed (Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995; Way et al., 2004). Consequently, more research is needed to clarify the contribution of personal trauma history and also identify other factors that potentially interact with personal trauma to produce vicarious trauma symptoms.

In addition, the extent of applied work with trauma clients and trauma-specific didactic education may be related to vicarious traumatization. Several studies using samples of practicing therapists have found that a shorter length of time providing trauma treatment is associated with more difficulty related to trauma work, including increases in avoidance, dissociation, anxiety, intrusions, and other trauma symptoms (Chrestman, 1999; Pearlman & Mac Ian, 1995; Way et al., 2004). When new therapists encounter symptoms of vicarious traumatization, they may experience anxiety, shame, and a sense of incompetence, and consequently not seek adequate supervision and support (Neumann & Gamble, 1995; Pearlman & Mac Ian, 1995). If vicarious traumatization is left unattended and unresolved, there is the risk that the therapist may become emotionally distant and unable to maintain a warm, empathic, and responsive stance to clients (McCann & Pearlman, 1990), which may eventually result in burnout and subsequent departure from the field (Pearlman & Saakvitne, 1995). Given earlier research indicating significantly greater stress responses among practicum and internship trainees compared to more experienced professional staff (Rodolfa, Kraft, & Reilley, 1988), it is especially important to extend the investigation of vicarious trauma to graduate students in applied psychology programs.

Pearlman and Saakvitne (1995) argued that without formal trauma-specific training, the trauma therapist is vulnerable to confusion and potentially harmed by the work. Although there is growing consensus supporting the need for some degree of training and supervision in trauma work as part of the graduate curricula (Campbell, Raja, & Grining, 1999; Figley, 1995), many professional therapists indicate that their academic training did not provide them with the necessary skills for working with trauma survivors (Alpert & Paulson, 1990; Pope & Feldman-Summers, 1992). Whereas students often receive minimal information regarding trauma therapy in the context of various academic courses or training seminars, fewer students receive extensive training regarding trauma in a semester long course or intensive multiday workshop. With no published studies on this issue to date, the current study explores the question of whether the amount of formal trauma-specific didactic training is associated with vicarious trauma symptoms and interacts with therapist characteristics.

Defense Style

Since Freud (1940/1964) proposed that the ego unconsciously adopts habitual psychological defenses to shield itself against anxiety, the construct of defense mechanism has been widely accepted in the psychological community, as well as the larger mainstream society. The *Diagnostic and Statistical Manual, 4th*

edition, Test-Revision (DSM-IV-TR; American Psychiatric Association [APA], 2000) defines defense mechanisms (or coping styles) as “automatic psychological processes that protect the individual against anxiety and from the awareness of internal or external dangers or stressors. Individuals are often unaware of these processes as they operate” (p. 807). The theoretical literature (Cramer, 1998; Vaillant, 1971) distinguishes between immature defense mechanisms that emerge early in development and are more unconscious (e.g., splitting, acting out, isolation) and mature coping strategies that emerge later in development and operate more consciously (e.g., sublimation, rationalization, humor). According to Bond (1995), the developmental progression of defense styles is characterized by a hierarchical shift from basic anxiety regarding controlling raw impulses, to an intermediate level with an overriding focus on the importance of others, to a more adaptive style showing less preoccupation with others and more creative expression of the inner self. The number of levels proposed in the maturational hierarchy of defenses varies from three (Andrews, Singh, & Bond, 1993), to four (Bond, Garner, Christian, & Sigal, 1983; Vaillant, 1975, 1976), to seven developmental levels (APA, 2000).

Regardless of how many defense levels are measured, there seems to be consensus that maladaptive defensive reactions to stressors are characterized by the tendency to either distort or restrict conscious perception of a painful reality (Punamaki, Kanninen, Qouta, & El-Sarraj, 2002; Silverstein, 1996). The weight of empirical evidence suggests that immature/maladaptive defenses are associated with poor psychological functioning, including personality disorders, depression, anxiety disorders, and posttraumatic symptoms (Bond, 2004; Punamaki et al., 2002; Silverstein, 1996). Because defense mechanisms serve a protective function in helping to maintain psychological integrity in the face of threat, Punamaki et al. (2002) argued that defenses are instrumental in determining ongoing adjustment to trauma and should be treated as moderating variables when examining the associations between traumatic stress and psychological distress.

Pearlman and Saakvitne (1995) hypothesized a relationship between vicarious traumatization and psychological defenses. Although research examining specific defense styles in relation to vicarious traumatization is lacking, recent studies have reported that therapists with healthy coping styles characterized by active, problem-focused strategies reported fewer PTSD symptoms, less vicarious traumatization, less negative affect, fewer disruptions in self-trust schemas, and less burnout than those with avoidant or emotion-focused coping styles (Schauben & Frazier, 1995; Weeks, 2000). It is also important to examine more unconscious defense mechanisms that may influence these broad coping strategies because therapists who are uncomfortable in the presence of powerful emotions, or whose affect tolerance is exceeded, will draw upon familiar, protective defenses. Herman (1997) suggested that restrictive defenses (e.g., denial, dissociation, numbing) and overinvolved, intrusive caregiving are commonly employed defense mechanisms used by therapists in response to vicarious traumatization. Restrictive defenses may result in minimization or avoidance of traumatic material and distancing from the client. Conversely, overinvolved therapists may act in an impulsive, intrusive manner, characterized by rescue attempts, boundary violations, or controlling behavior. Consequently, supervisors need to be aware of these defensive tendencies among trainees in order to assist

them in processing reactions to clients and foster the development of more adaptive coping strategies.

Exploratory Study

The current study is a preliminary exploration of the correlates of vicarious trauma among graduate student trainees, which may differ from factors previously identified in samples of working mental health practitioners. The study had two primary objectives: (a) to examine the relationship between vicarious traumatization among trainees and variables recognized as potentially influential in this process among practicing therapists (i.e., history of trauma, clinical experience, trauma-specific training) and (b) to explore the relationship between defense style and vicarious traumatization symptoms, as well as its possible interaction with the previous three factors in relation to reported symptoms. Based on the existing theoretical and empirical literature, we expected that higher levels of trauma symptoms would be significantly related to a personal history of trauma, less applied experience with trauma survivors, and minimal or no trauma-specific training. Also, compared to other defense styles, we predicted that the adaptive defense style would be related to significantly lower levels of trauma symptoms and that defense style would interact with personal trauma, experience level, and trauma-specific training.

Method

Participants

Participants were recruited from the APA-accredited clinical and counseling psychology graduate programs at state universities in Texas. Out of 355 packets distributed to graduate students, 134 packets were returned yielding a response rate of 37.7%. However, five packets were excluded because the student currently was not enrolled in the program or was not working with trauma clients, thus reducing the response rate to 36.3%. Of the 129 participants included in the study, 83.7% were female and 85.3% were Caucasian. Participants ranged in age from 22 to 55 years, with a mean of 31.21 ($SD = 8.69$), median of 28, and mode of 26. Doctoral level counseling (43.4%; $n = 56$) and clinical (25.6%; $n = 33$) students comprised the majority of the sample, with masters students making up the remaining 31% (counseling $n = 39$; clinical $n = 1$).

Instrumentation

Background information. An experience questionnaire was developed for this study to gather demographic information. In addition, participants were asked to indicate whether they had substantial (e.g., multiple workshops, semester-long course, other extensive formal training), minimal (e.g., one workshop or seminar), or no trauma-specific training. In order to assess for previous trauma work experience, the questionnaire inquired about previous number of semesters spent working with trauma clients in the capacity of a therapist in a practicum, internship, paid employment, or volunteer experience. Finally, a history of personal trauma was assessed by asking whether or not the student therapist had ever personally been (a) involved in a natural disaster; (b) a witness or participant in combat; (c) a victim of a violent crime; (d) a victim of physical, sexual, or emotional abuse as a child; (e) an

adult victim of sexual assault or rape; (f) involved in a physically abusive relationship; or (g) a witness to someone being seriously injured or killed.

Vicarious traumatization. The Trauma Symptom Inventory (TSI; Briere, 1995; Briere, Elliot, Harris, & Cotman, 1995) is a widely used self-report instrument consisting of 100 items describing trauma symptoms, which are rated on a 4-point scale of frequency of occurrence over the past 6 months. Because TSI subscales that are broad and not definitive of trauma (i.e., depression, anger/irritability, tension reduction) or primarily relate to sexual trauma (i.e., sexual concerns, dysfunctional sexual behavior) are less relevant to vicarious trauma, five subscales totaling 42 items were selected to represent vicarious trauma: (a) Anxious Arousal measures posttraumatic hyperarousal symptoms like jumpiness and tension; (b) Intrusive Experiences measures reexperiencing symptoms such as flashbacks and nightmares; (c) Defensive Avoidance measures both cognitive and behavioral avoidance strategies, (d) Dissociation measures dissociative experiences, including depersonalization, derealization, numbing; and (e) Impaired Self-Reference measures self-concept problems, such as identity confusion and low self-esteem. Across four validation studies, Briere (1995) reported relatively high internal consistency for these subscales, with alpha reliability coefficients ranging from .82–.87 for anxious arousal, .87–.90 for intrusive experience, .87–.90 for defensive avoidance, .82–.88 for dissociation, and .85–.88 for impaired self-reference. The TSI has also demonstrated good convergent and predictive validity in clinical and nonclinical samples (Briere et al., 1995; Briere & Elliott, 1997).

Defense style. Derived from a list of defense mechanisms currently being considered for inclusion as a separate axis in the DSM nosology (Bond, 1995), the Defense Style Questionnaire (DSQ; Bond et al., 1983; Bond & Wesley, 1996) is the most widely used self report of defense mechanisms (Bond, 2004). The original instrument consists of 88 items on a 9-point Likert scale. Based on factor analysis, the DSQ identifies a hierarchy of four basic defense styles: (a) Maladaptive action style consists of the most immature defense mechanisms that reflect an inability to manage impulses by taking constructive action, for example, withdrawal, acting out, regression, inhibition, passive aggression, and projection; (b) Image-distorting style consists of defenses involving splitting the image of self and other into good and bad and includes derivatives of omnipotence, splitting, and primitive idealization; (c) Self-sacrificing style reflects a need to maintain an image of the self as kind, helpful, and never angry, which is accomplished through consists of reaction formation and pseudoaltruism; and (d) Adaptive style represents positive coping strategies and consists of the most mature defense mechanisms such as suppression, sublimation, and humor.

Following the manual (Bond & Wesley, 1996), the DSQ scale scores were used to group participants in the current study into these four prototypical defense styles. The DSQ reliably identifies defense styles, which correspond to hypothesized patterns of unconscious psychological mechanisms (Andrews et al., 1993). The developmental hierarchy of styles from least mature to most mature is supported by theory (Semrad, Grinspoon, & Feinberg, 1973; Vaillant, Bond, & Vaillant, 1986) and evidence of expected correlations with ego strength and ego development scores (Bond, 1995). Internal consistency of the DSQ was demonstrated through

significant item-total correlations ($p < .001$) and factor analyses showing four theoretically meaningful clusters. The DSQ has demonstrated test-retest reliability, construct and criterion validity, and the ability to distinguish patients from nonpatients (Andrews et al., 1993; Bond et al., 1983, 1989; Perry & Cooper, 1989; Sammallahti, Aalberg, & Pentinsaari, 1994). Andrews et al. reported comparable findings regarding internal reliability and test-retest reliability for long and short versions of the DSQ when a three factor solution was used to identify immature, neurotic (~self-sacrificing), and mature defense styles. Internal consistency on the long and short versions, respectively, were .89 and .80 on the immature factor, .72 and .58 on the neurotic factor, and .59 and .68 on the mature factor.

Procedures

To explore graduate training in Texas, the public state universities with doctoral psychology programs in clinical or counseling psychology were identified; if the university also offered masters programs, these were included in recruitment. Program directors of 11 graduate programs at five universities were contacted. The directors of nine programs (PhD = 7; MA = 2) at four universities, who agreed to distribute questionnaire packets to students enrolled in practicum or internship in fall 2002, were mailed packets containing a recruitment letter with a brief description of the study, consent forms, an experience questionnaire, the Trauma Symptom Inventory, the Defense Style Questionnaire, and a stamped envelope to return the completed forms. The number of packets sent to each program was based on the number of enrolled students in each program. The manner in which the packets were distributed was negotiated with each program director. A follow-up call was placed to each program director 2 weeks after the packets were sent to ensure their distribution.

Results

Descriptive Data and Analyses

Over a third of the sample (38.7%; $n = 50$) reported a history of personal trauma. The majority of the sample (74.3%) reported some formal didactic training in trauma work, with 38.7% ($n = 50$) participants reporting minimal training and 35.6% ($n = 46$) participants reporting substantial training. However, a full quarter of the sample ($n = 33$) reported working with trauma clients with no prior training related to trauma. Number of previous semesters experience with trauma work ranged from 0 to 38 ($M = 4.86$, $SD = 6.09$); however, the median number of semesters was 3, and the mode was 2, with 40% ($n = 52$) of the sample reporting two or fewer semesters working with trauma clients.

TSI scale means were not clinically significant, with only 8–15% of the sample exceeding the clinical cut-off score on each scale. However, taken together, 31% of the sample exceeded the clinical cut-off score on one or more TSI scale. Low cell counts necessitated collapsing maladaptive ($n = 3$) and image-distorting ($n = 6$) DSQ categories into one style, which yielded 7.0% maladaptive/image-distorting ($n = 9$), 51.2% self-sacrificing ($n = 66$), and 41.8% adaptive ($n = 54$). This decision is supported by the theory, which distinguishes immature from mature defenses by the tendency to either distort or restrict conscious perception of

painful reality (Cramer, 1998; Punamaki et al., 2002; Silverstein, 1996; Vaillant, 1971). Moreover, these three defense styles correspond to the 3-factor solution identified by Andrews et al. (1993) for the DSQ-40, a brief version of the DSQ that identifies mature (e.g., humor, sublimation), intermediate/neurotic (e.g., pseudoaltruism, reaction formation), and immature defenses. The latter category combines maladaptive and image-distorting items (e.g., acting out, passive-aggressiveness, splitting, projection). Due to the low number of maladaptive/image-distorting participants, analyses proceeded on a strictly exploratory basis for this category.

Preliminary analyses were conducted to determine whether study variables were systematically related to demographic variables. With few exceptions, age, gender, ethnicity, and type of program (counseling PhD, clinical PhD, counseling/clinical MA) were not associated with TSI scores. Although an overall multivariate analysis of variance (MANOVA) was nonsignificant for TSI scales, univariate results indicated that ethnicity was significantly associated with TSI intrusive experience, $F(1, 127) = 5.43$, $p = .02$, with ethnic minority participants reporting lower levels of intrusive experience. Because of the prevalence of female participants, we also examined whether gender was associated with each of the independent variables but found no gender differences in defense style, history of personal trauma, applied experience, or formal trauma-specific training. Based on these findings, MANOVAs were conducted without controlling for demographic variables, but follow-up univariate tests for TSI intrusive experience used ethnicity as a covariate.

Hypothesis Testing

Three multifactorial MANOVAs, which control for the possibility of inflated overall Type I error rate and also incorporate correlations among variables into the test statistic (Stevens, 1996), were conducted to test the association of five trauma symptoms with the three defense styles and either personal trauma, applied experience, or trauma-specific training. Wilks's lambda F and an alpha value of .05 were used to determine significance of MANOVAs. To better account for Type I error in follow-up univariate tests, the Bonferroni correction indicated that a .01 level was needed to determine significance.

Table 1 shows the results of the three MANOVAs and follow-up analysis of variances (ANOVAs). The first MANOVA with defense style and personal trauma (yes/no) yielded a significant main effect for defense style ($F = 3.40$, $df = 10, 236$, $p < .000$), a significant interaction term ($F = 2.86$, $df = 10, 236$, $p = .002$), but a nonsignificant effect for personal trauma ($F = 2.21$, $df = 5, 118$, $p = .058$). Follow-up ANOVAs for defense style were significant for all trauma scales: anxious arousal, $F = 5.19$, $df = 2$, $p = .007$, intrusive experiences, $F = 5.92$, $df = 2$, $p = .004$, defensive avoidance, $F = 7.82$, $df = 2$, $p = .001$, dissociation, $F = 8.88$, $df = 2$, $p = .001$, and impaired self-reference, $F = 8.40$, $df = 2$, $p < .000$. Post hoc comparisons indicated that self-sacrificing style was associated with significantly higher scores than adaptive style on all five trauma scales. Maladaptive/image-distorting style was also associated with significantly higher scores than adaptive style on impaired self-reference, and higher scores than both adaptive and self-sacrificing styles on dissociation. The interaction of defense style and personal trauma was significant for intrusive experience, $F = 7.01$, $df = 2$, $p = .001$ and defensive avoidance, $F = 6.65$, $df = 2$, $p = .002$, and also approached significance for

Table 1

Factorial MANOVA for Defense Style and Personal Trauma, Applied Experience, and Formal Training ($N = 128$)

TSI scales	Personal trauma			Applied experience			Training		
	Defense style <i>F</i>	Personal trauma <i>F</i>	Defense × trauma interaction <i>F</i>	Defense style <i>F</i>	Applied experience <i>F</i>	Defense × experience interaction <i>F</i>	Defense style <i>F</i>	Training <i>F</i>	Defense × training interaction <i>F</i>
MANOVA	3.40*** (.126)	2.21 (.085)	2.86** (.108)	2.06* (.080)	3.37** (.124)	2.07* (.080)	2.10* (.083)	3.58*** (.134)	1.17 (.059)
ANOVAs									
Anxious arousal	5.19** (.078)	.006 (.000)	4.04* (.062)	3.93* (.060)	.45 (.004)	1.42 (.023)	3.32* (.057)	1.93 (.031)	.96 (.028)
Intrusive experience	5.92** (.089)	4.75* (.038)	7.01*** (.104)	2.48 (.039)	.23 (.002)	.62 (.010)	5.25** (.081)	2.01 (.033)	.21 (.007)
Defensive avoidance	7.82*** (.114)	9.13** (.070)	6.65** (.098)	4.39** (.067)	.001 (.000)	1.16 (.019)	6.07** (.092)	.36 (.006)	.52 (.017)
Dissociation	8.88*** (.127)	.02 (.000)	1.32 (.021)	5.91** (.088)	5.80* (.045)	4.81** (.073)	4.35** (.068)	3.44* (.054)	1.67 (.053)
Impaired self reference	8.40*** (.121)	.88 (.007)	1.32 (.021)	4.15** (.063)	8.61** (.065)	1.76 (.028)	4.75** (.073)	4.01* (.063)	1.75 (.055)

Note. Ethnicity was used as a covariate in ANCOVAs for Intrusive Experience.

* $p < .05$. ** $p < .01$. *** $p < .001$. Numbers in parentheses = partial η^2 . Effect sizes for partial η^2 are .01 ~ small, .06 ~ medium, .14 ~ large.

anxious arousal, $F = 4.04$, $df = 2$, $p = .020$. Whereas participants with an adaptive defense style did not appear to differ based on personal trauma, participants with a self-sacrificing defense style and personal trauma reported higher levels of symptoms than self-sacrificing participants without personal trauma. In contrast, participants with a maladaptive/image-distorting style and personal trauma reported lower levels of symptoms than maladaptive/image-distorting participants without personal trauma.

The second MANOVA yielded significant main effects for defense style ($F = 2.07$, $df = 10$, 238 , $p = .028$) and applied experience ($F = 3.37$, $df = 5$, 119 , $p = .007$), and a significant interaction ($F = 2.07$, $df = 10$, 238 , $p = .028$). Follow-up univariate tests with defense style were similar to the first MANOVA for defensive avoidance, dissociation, and impaired self-reference, but did not meet the .01 level for anxious arousal, $F = 3.93$, $df = 2$, $p = .022$, and intrusive experience, $F = 2.48$, $df = 2$, $p = .088$. Follow-up ANOVAs for applied experience were significant at the .01 level only for impaired self-reference, $F = 8.61$, $df = 1$, $p = .004$ and approached significance for dissociation, $F = 5.80$, $df = 1$, $p = .017$. In each case, participants with two or fewer semesters of applied experience reported higher levels of trauma symptoms. The interaction of defense style and applied experience was significant only for dissociation, $F = 4.81$, $df = 2$, $p = .010$. Although no substantial differences were noted for self-sacrificing or adaptive defense styles, participants with a maladaptive/image-distorting style and two or fewer semesters of applied experience reported significantly higher levels of dissociation compared to maladaptive/image-distorting participants with three or more semesters of applied experience.

The final MANOVA yielded significant main effects for defense style ($F = 2.10$, $df = 10$, 232 , $p < .000$) and formal trauma-specific training ($F = 3.58$, $df = 10$, 232 , $p < .000$), but a nonsignificant interaction ($F = 1.47$, $df = 20$, 386 , $p = .088$). Results of follow-up univariate tests for defense style were similar to the previous MANOVAs but did not reach the .01 level for anxious arousal, $F = 3.62$, $df = 2$, $p = .03$, and dissociation, $F = 4.35$, $df = 2$, $p = .015$. Despite a highly significant multivariate main effect for formal trauma training, follow-up univariate tests showed only trends ($p < .05$) for dissociation, $F = 3.44$, $df = 2$, $p = .035$ and impaired self-reference, $F = 4.01$, $df = 2$, $p = .021$.

Based on medium effect sizes, exploratory post hoc comparisons were conducted and indicated that participants with substantial trauma-specific training reported lower levels of dissociation than those with minimal training, and also lower levels of impaired self-reference than those with both minimal and no training.

Implications

Although current findings must be considered preliminary and require replication with a larger, more representative sample, overall results of this exploratory study generally support theoretical predictions regarding vicarious trauma and have important implications for the training and supervision of graduate students in counseling and clinical psychology programs. We first address current findings related to direct associations of vicarious trauma symptoms with defense styles, then discuss results for personal history of trauma, applied experience, and trauma-specific training. The training implications of each of these findings are considered.

Defense Style

Similar to previous findings documenting the predominance of healthy coping strategies among therapists (Schauben & Frazier, 1995), the distribution of defense styles in this sample of student therapists was highly skewed in favor of the two more mature/adaptive styles in Bond's hierarchy of defenses—self-sacrificing and adaptive. Only 7.0% of the sample reported a maladaptive/image-distorting style, which was associated with significantly higher levels of impaired self-reference and dissociation. From a training standpoint, the low frequency of this defense style is encouraging news and suggests that graduate programs in applied psychology may not attract or admit people who typically employ immature defense mechanisms, such as acting out, regression, projection, or splitting. Alternatively, experiences in graduate training or personal counseling, which is often encouraged by training programs, may have increased self-awareness of individual issues and contributed to the development of more healthy defense mechanisms. Unfortunately, the low proportion of the

maladaptive/image-distorting style in the current sample also must be considered a serious statistical limitation of the exploratory analyses, increasing the need for cautious interpretation of results for this group.

Consistent with current hypotheses and previous research with trauma survivors (Punamaki et al., 2002; Romans, Martin, Morris, & Herbison, 1999; Silverstein, 1996), the 54 trainees with an adaptive defense style consistently reported the lowest levels of all five vicarious trauma symptoms. This finding suggests that the student therapist's use of adaptive coping mechanisms such as suppression, sublimation, and humor decreases the likelihood of experiencing vicarious traumatization. However, despite the clear indication of predominantly more mature coping strategies among these trainees, it is noteworthy that over half of the sample reported a self-sacrificing defense style, which was associated with significantly higher levels of trauma symptomatology than the adaptive style. Trainers and supervisors should not be surprised that graduate programs in applied psychology attract people who are highly motivated to help others and thus often willing to sacrifice of themselves in order to do so. However, current findings suggest that trainees with a self-sacrificing defense style characterized by reaction formation and pseudoaltruism may be particularly vulnerable to vicarious traumatization.

Etherington (2000) suggested that therapists who are less self-aware and uncomfortable with intense feelings will draw upon familiar, though possibly maladaptive, protective defenses. Students who employ immature defense styles may need more supervisory assistance, particularly in coping with countertransference responses. Encouraging self-exploration in the context of supervision or personal therapy may facilitate the student's development of more mature defense strategies. Training seminars or other didactic education may assist students in learning about their typical defense style and its potential impact on themselves and their ability to provide effective therapy. Further, supervisors can conduct informal assessments of trainee defense styles to provide information regarding possible training needs for individual supervisees. For example, Herman (1997) warned that in the therapeutic context the result of employing defense mechanisms associated with the self-sacrificing style might include rescue attempts, boundary violations, or controlling behaviors. Trainees with a maladaptive/image-distorting style may instead tend to distance themselves from their emotions and therapeutic work, lose the capacity to empathically engage with trauma clients, and avoid discussing these cases in supervision. Supervisors alert to their trainee's defense style might avert these problems by emphasizing the importance of self-care activities, regularly inquiring about trauma cases, directly addressing possible countertransference issues, and actively promoting the early development of skills needed to draw appropriate boundaries with clients.

Personal History of Trauma

The finding that approximately one third of the current sample reported previous trauma matches previous reported prevalence rates among professional psychologists (Pope & Feldman-Summers, 1992). Current findings of interaction effects suggest that some of the inconsistent and often contradictory findings of previous research on personal trauma with practicing clinicians (Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995; Way et

al., 2004) might be explained by variations in defense style, which appears to play a moderating role in the relationship between personal history and vicarious traumatization. Whereas an adaptive defense style seems to be a protective factor against vicarious trauma symptoms regardless of a history of personal trauma history, the other defense styles interacted with trauma history in relation to intrusive experience, defensive avoidance, and possibly anxious arousal. Specifically, among student therapists with a trauma history, a self-sacrificing defense style appears to increase the risk of these three vicarious trauma symptoms. While a self-sacrificing style by itself is associated with higher levels of vicarious trauma, in the context of personal trauma history, this defense style is even more problematic and warrants close monitoring by supervisors. Counterintuitive findings regarding the interaction of personal trauma and maladaptive/image-distorting defense style, as well as the low frequency of this style, suggest that further replication with greater representation of immature defense styles is necessary before any conclusions can be drawn.

Although current findings suggest that the personal trauma histories, as well as defense styles, of student therapists are potentially relevant to the supervisory process, the appropriateness of gathering personal information from supervisees is an issue of professional boundaries (Heru, 2006), with diverging opinions usually guided by theoretical orientation to supervision. Nondisclosure of personal issues to supervisors is common and may represent healthy boundaries or the ability to distinguish issues relevant to supervision from those more appropriate for individual therapy (Ladany, Hill, Corbett, & Nutt, 1996). However, there is also evidence that nondisclosure may be related to impression management, poor supervisory alliance, and the risk of negative perceptions regarding professional competence (De Araujo, 2003; Ladany et al., 1996). Whereas many supervisors and supervisees believe that it is appropriate to point out supervisee defense mechanisms (Heru, Strong, Price, & Recupero, 2004), supervisees report that disclosures of childhood abuse are unsafe and professionally dangerous (De Araujo, 2003). Nevertheless, current results suggest that to the extent that a trainee's traumatic history generates countertransference responses that surface in supervision of trauma cases, supervisors should be prepared to discuss the potential impact of personal trauma on the trainee's state of mind and applied work with trauma clients. This appears particularly true for students who utilize a self-sacrificing defense style due to the increased potential for vicarious trauma symptoms. While processing of countertransference is important for some theoretical approaches to clinical supervision, supervisors must also maintain their training role, which may entail a referral to professional counseling for students exhibiting vicarious trauma.

Training Factors: Experience Level and Trauma-Specific Training

Consistent with existing research (e.g., Pearlman & Mac Ian, 1995), current results support the idea that novice therapists may be more vulnerable to vicarious traumatization. As expected, student therapists with 0–2 semesters of applied experience working with trauma clients reported significantly higher levels of impaired self-reference than those with more semesters experience. This finding is in line with models of trainee development and supporting research suggesting that students beginning applied training

are more preoccupied with self-concerns than more advanced students (e.g., Stoltenberg & Delworth, 1987; Stoltenberg, McNeill, & Crethar, 1994; Tyron, 1996), and consequently more likely to be vulnerable to countertransference issues that require close and careful supervision. In particular, supervisors should be alert for symptoms of identity confusion and disrupted self-concept among new trainees working with trauma clients. Less applied experience also appeared to interact with a maladaptive/image-distorting defense style in predicting higher levels of dissociation, though once again low frequency of this style demands caution and replication.

While 35.6% of the student therapists in this sample reported substantial trauma training in the form of a semester course or multiple intensive workshops, an alarming 25% of the sample reported working with trauma clients with no prior formal training related to trauma. Although multivariate results indicated that the degree of trauma-specific training was highly associated with trauma symptoms, subsequent univariate tests were nonsignificant. These findings and the lack of an interaction effect indicate that deficits in trauma-specific training are broadly associated with a pattern of vicarious trauma symptoms independent of defense style. Moreover, no significant differences were noted between students with no trauma-specific training and students with minimal training. While previous scholars have highlighted the need to inform students of the inherent occupational hazards of working with trauma survivors (e.g., Salston & Figley, 2003; Ghahramanlou & Brodbeck, 2000), current findings suggest that one-time lectures or class discussions are not enough; rather, students need substantial trauma-specific training in the context of a full semester of coursework or multiple intensive workshops in order to protect themselves against the potential negative impact of trauma counseling.

Limitations and Conclusions

It is important to emphasize that this was an exploratory study with several potential limitations. Despite following recommended procedures for mail surveys, the return rate was fairly low, possibly due to the use of graduate program directors as intermediaries in distributing questionnaire packets. As a result the sample was small and also limited to primarily female volunteers from nine graduate programs in clinical and counseling psychology at four state universities in Texas. While the graduate programs were reputable, APA-approved training sites, which presumably include similar curricula and geographic diversity in student background, a potential sampling bias limits the generalizability of the findings. However, no gender differences emerged for any variables in the study, and the sample appears fairly representative of the typical gender distribution in graduate psychology programs based on data indicating only a slightly higher proportion of women than reported for 1999–2000 first-year psychology graduate students (74%; Pate, 2001), and 2005 and 2006 internship applicants (78%; Keilin, 2006).

In addition, the use of the DSQ, which has low to moderate scale reliability and yielded a very low frequency of the maladaptive/image-distorting defense style, must be considered a limitation. The disproportionately higher number of the more adaptive defense styles also raises the possibility that self-selection of participants may have influenced results. Similarly, therapists with per-

sonal trauma who had worked through related distress may have been more comfortable with the study topic than students with unresolved trauma issues. Finally, the current study used a simple yes/no question to determine the presence of past trauma. Characteristics and frequency of traumatic events clearly can affect long-term outcomes (see Higgins & McCabe, 2001, for review). For example, a history of interpersonal trauma (e.g., child abuse, physical, or sexual assault) may be more pertinent than impersonal trauma (e.g., natural disaster) to vicarious trauma responses. Alternatively, the salience of personal trauma may be a function of its similarity to the traumatic events of clients. Research using more sophisticated measures of trauma history and vicarious trauma symptoms is needed to further clarify the relationship between personal trauma and vicarious traumatization. In particular, an investigation of the role of previous personal therapy and trauma characteristics may be useful in identifying risk and protective factors.

In spite of these limitations, the current study extends the literature on vicarious trauma to a sample of student therapists and indicates that personal issues of the trainee and certain training experiences are related to symptoms of vicarious traumatization. Educators should particularly consider the implications of findings indicating that self-sacrificing defense styles, which are likely to be common among many trainees, are associated with higher levels of vicarious trauma symptoms. Trainers also may wish to review curricula on trauma to ensure that students are receiving adequate preparation before working with traumatized clients. Education regarding trauma therapy should include an understanding of the intensity of the work, as well as the psychological impact of trauma and recovery process for both clients and therapists (O'Halloran & O'Halloran, 2001). We echo O'Halloran and O'Halloran's (2001) encouragement for educators to carefully attend to training in self-care strategies among both trainees and supervisors alike and refer the reader to their excellent recommendations regarding ameliorating secondary traumatic stress among graduate students.

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