The Relationship Between Trauma Symptoms, Developmental Work Personality, and Vocational Identity

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Abstract
Developmental work personality and vocational identity can be greatly affected by traumatic events in an individual's life. Although studies exist examining the relationship between trauma and career development, more research is needed to understand the relationship between the two. This study examined the relationship between trauma symptoms, developmental work personality, and vocational identity. Results indicate that participants who experienced high levels trauma had lower scores on developmental work personality and vocational identity.

Keywords
trauma, vocational identity, developmental work personality
The Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) defines trauma as an experience or set of experiences that result in severe stress reactions that may encompass an individual physically or psychologically. These types of experiences exceed an individual’s internal and external resources (Creed, Fallon, & Hood, 2009; Savickas & Porfeli, 2012; Van der Kolk, 1989). Traumatic experiences may be processed as harmful to an individual’s physical or psychological safety, and may have long-term effects on the individual’s perception of physical safety, safety with others, emotional well-being, and psychic well-being (SAMHSA, 2012, 2014).

Human beings are hard wired to operate within the context of relationships (Lieberman, & Knorr, 2007; Van der Kolk, 1989), and trauma attempts to sever that connection (Bloom, 1997; Ullman, Relyea, Peter-Hagens, & Vasquez, 2013). Trauma serves as a negative stimulus that overwhelms the brain’s ability to fully integrate an extremely frightening event or set of events, resulting in a variety of psychological outcomes, including dissociative responses (Herman, 1992; Suleiman, 2008). Trauma has also been shown to negatively impact cognitive functioning, memory acquisition, self-concept, and relationships, as trauma influences individuals’ ability to see themselves’ as able to make competent contributions to the world (Strauser, Ketz, & Keim, 2002).

The impact that trauma has on self-concept and relationships is sometimes moderated by the degree of trauma symptomology, and developmental stage of the individual (Bloom, 1997; Herman, 1999), if trauma symptomology is present at all. It is important to note that experiencing trauma does not ensure later trauma symptomology in every individual that is exposed to an event that is threatening to their own life or the life or someone connected to them (Becker-Blease, & Freyd, 2005; Breslau, 2009; Ozer, Best, Lipsey, & Weiss, 2008; Ullman, Relyea, Peter-Hagene, &Vasquez, 2013).
Impact of Trauma on Career Development

Trauma continues to be one of the top reasons individuals seek counseling (Mailloux, 2014), with over 90 percent of clients experiencing trauma (National Association of State Mental Health Program Directors, 2012). Individuals who attend career counseling tend to have mental health issues connected with work (Paul & Moser, 2009) and many college students discuss mental health issues and career when they seek counseling (Hinkelman & Luzzo, 2007). The mental health issues they discuss often include an experience of trauma. Prescod and Zeligman (2018) examined the relationships between trauma symptoms, posttraumatic growth, and career adaptability in undergraduate students who were trauma survivors and found that trauma symptoms and posttraumatic growth were predictive of career adaptability. Experiencing growth after going through trauma allowed survivors to have increased career adaptability. Day, Lawson, and Burge (2017) studied the lived experiences of counselors who were at Virginia Tech at the time of a shooting and found that clinicians felt they were more able to understand their clients and be more attentive to their relationships with clients as a result of experiencing trauma.

In contrast, experiencing a trauma can cause people to disconnect from their work. Individuals who have experienced trauma may have trouble connecting to their coworkers, fulfilling job responsibilities, and overall vocational maturity (Coursol, Lewis, & Garrity, 2001). Female survivors of trauma experience challenges such as returning to work and feelings of isolation (Ballou, Balogun, Gittens, Matsumoto, & Sanchez, 2015). Veterans, for example, experience trouble transitioning to life and work when they have experienced psychological trauma while in active duty (Rausch, 2013). In a study examining the impact of interpersonal violence on the career development processes of women, researchers noted the influence that trauma has on the stagnation of human development in individuals with early traumatic
experiences (Morris, Shoffner, & Newsome, 2009). Additionally, trauma has been shown to negatively impact individuals’ self-concept, self-efficacy, and ability to execute career-related tasks (Morris et al., 2009). Trauma has been linked to the development of negative thoughts and beliefs about one’s career outcomes (Chronister, Harley, Aranda, Barr, & Luginbuhl, 2012; Morris et al., 2009).

Similarly, Strauser, Lustig, Cogdal, and Uruk (2006) conducted a study that examined the impact of trauma on developmental work personality, vocational identity, and the impact of trauma symptomology on career development processes for individuals with disabilities. They discovered that while disability status did not show a significant impact on vocational identity and developmental work personality measures, higher levels of trauma symptomology were shown to be associated with individuals’ lowered vocational identity and developmental work personality (Strausser et al., 2006). As individuals progress throughout the career development process, a myriad of factors influence the development of an individual’s work personality. These factors include environmental and relationship observations, and the development of behaviors that contribute to who an individual is as a worker (O’Sullivan, & Strauser, 2010).

When one or more of those contributory experiences and observations results in the experience of trauma symptoms for an individual, career thoughts, and career decision-making may be negatively impacted (Strauser et al., 2006). While existing research shows the influence of career related issues to depression and anxiety (Arnett, 2007; Rottinghaus, Jenkins, & Jantzer, 2009; Walker & Peterson, 2012), little research exists examining the influence of traumatic events, and trauma symptomatology on career development (Strauser et al., 2006). The current study examined the relationship between trauma symptoms, developmental work personality, and vocational identity. Research questions examined were as follows:
(a) What is the relationship between trauma symptoms, developmental work personality and vocational identity?
Hypothesis: Individuals with a healthier work personality also have low levels of intrusion, avoidance, and hyperarousal. Those with a less healthy work personality also have higher intrusion, avoidance, and hyperarousal.

(b) Is there a difference in these career variables (i.e., developmental work personality and vocational identity) for individuals who report high levels of trauma symptoms when compared with individuals who report lower levels of trauma, and no trauma experience?
Hypothesis: Individuals who report higher levels of intrusion, avoidance, and hyperarousal will have significantly lower developmental work personalities and vocational identity. Those with lower levels of intrusion, avoidance, and hyperarousal will have significantly higher developmental work personalities and vocational identity.

(c) Are there differences in these career variables (i.e., developmental work personality and vocational identity) based on the type of trauma individuals experience?
Hypothesis: Individuals will show statistically significant differences in developmental work personality based on type of trauma experienced. Individuals will show statistically significant differences in vocational identity based on type of trauma experience.

Method

Participants
Participants were 212 undergraduate students at a large southeastern university. Students' age ranged from 18-59 with the majority of the students being 21 and 22 years of age (26.4%). Approximately 49% ($n = 103$) of participants identified as Black/African American, with 26.4% ($n = 56$) identifying as Caucasian/White/European American. Most of the participants were female
(71.7%, n = 152) and 27.8% identified as male (n = 59) with 1 participant identifying as other. In regard to school year, the majority of the participants, n = 148 were seniors at university, 25% were juniors, and 5.2% were sophomores. When asked if they were a survivor of a traumatic experience, 100 participants responded saying "yes."

**Instruments**

**Demographic Questionnaire.** The researchers in this study constructed a demographic questionnaire that was used to gather additional data on participants. The questionnaire included items regarding age, gender, race, sexual orientation, religious affiliation, relationship status, country of citizenship, year in school, immigration history, grade point average (GPA), student organization involvement, and disability status. To gain information regarding trauma experiences, items in line with the Trauma History Screen (THS; Carlson et al., 2011) were included in the demographic questionnaire. Trauma experiences from the THS included being suddenly abandoned, having a life-threatening illness, and seeing someone seriously injured or killed.

**My Vocational Situation.** My Vocational Situation (MVS) (Holland, Gottfredson, & Power, 1980; Holland, Johnston, & Asama, 1993) is a short instrument used to measure vocational identity. The MVS is available, electronically, for no charge and can be administered and scored in approximately 15 minutes. The scale offers both quantitative and qualitative information for use in career counseling and research. It consists of 18 true or false questions along with two questions (each with 4 sub questions) requiring a “yes or no” response. The scales examine career issues in the areas of vocational identity, career information, and personal barriers in career decision making (Hirschi & Herrmann, 2013; Holland, Gottfredson, & Power, 1980; Strauser et al., 2006). The MVS consists of three subscales, including the four-item Occupational Information (OI) scale, which assess individuals’ levels of vocational planning skills, and information about careers; the
Vocational Identity (VI) subscale, an 18-item true/ false scale that measures the level of stability an individual has related to career goals, skills, and interest; in addition to the four-item Barriers subscale, which consists of yes or no questions that measure career decision making processes (Strauser et al., 2006; Strauser, Lustig, & Ciftci, 2008). In this study, we found acceptable internal consistency of .84.

**The Developmental Work Personality Scale.** The Developmental Work Personality Scale (DWPS) (Strauser & Keim, 2002) is a 27-item scale that measures how successful an individual has completed essential tasks to develop a strong work personality. The DWPS uses a Likert scale that ranges from 0, *not at all like me*, to 5, *very much like me*. Scale items ask questions regarding tasks faced during school years that impact the development of a work personality, such as individuals’ ability to perform, adjust, and adapt within career roles. Sample items include “I was in trouble a lot with my teacher,” and “I got in fights a lot with classmates when I was in school” (Strauser et al., 2006). Internal consistency for the DWPS in the current study was adequate, at .87.

**Impact of Event Scale Revised.** The Impact of Event Scale Revised (IES-R) (Weiss & Marmar, 1997; Weiss, 2004) is a 22-item scale that measures the severity of trauma symptomology over the last seven days, related to a specific traumatic event. While the original IES evaluated trauma symptomology, it was not specific to one traumatic event. The revised edition highlights the evaluation of symptomology as they relate to a specific event of trauma, and in addition to the inclusion of questions that assess intrusion, avoidance, and numbing behaviors, the hyperarousal is now evaluated within the measure (Weiss, 2007). The IES-revised uses a 5-point Likert scale (0 = *not at all* to 4 = *extremely*) with respect to how distressing each item has been during the past week. The IES-R has three subscales which reflect intrusion (8 items), avoidance (8 items), and
hyperarousal (6 items), and show a high degree of intercorrelation ($rs = .52$ to $.87$, Creamer et al., 2003). High levels of internal consistency have been previously reported (Intrusion: Cronbach’s alpha = $.87 – .94$, Avoidance: Cronbach’s alpha = $.84 – .87$, Hyperarousal: Cronbach’s alpha = $.79 – .91$, Creamer et al., 2003; Weiss & Marmar, 1997). Test-retest reliability, collected across a 6-month interval, ranged from $.89$ to $.94$ (Weiss & Marmar, 1997). We found acceptable internal consistency of $.88$ for the current study.

**Procedure**

After ensuring that we adhered to the American Counseling Association’s Code of Ethics and obtaining approval by the university’s Institutional Review Board, the following assessments were added to an electronic survey website; (a) demographic questionnaire, (b) My Vocational Situation (MVS), (c) Developmental Work Personality Scale (DWPS), and (d) Impact of Events Scale Revised (IES-R). Participants were given access to the online website and were able to read the consent form and indicate consent, showing their agreeance to participate in the study. Through the informed consent, the researchers explained that participation in the study was voluntary and they were free to withdraw at any time without penalty. The participants were then prompted to begin a demographic questionnaire asking for information such as age, gender, ethnicity, religion, and sexual orientation. After completing the demographics form, participants proceeded to complete five additional assessments covering traumatic experiences, developmental work personality, and vocational identity. The assessments were given in the same order for each participant. They were not given incentive to participate in the study, but were told that the researchers hoped to gain insight into how trauma impacts a person’s career development. A total of 481 participants completed the surveys but the total sample size for the study was 212. In total, 44.7% of the materials we collected were usable; the assessments were fully completed.
Data Analysis

To examine the relationship between trauma symptoms, developmental work personality, and vocational identity, Pearson r correlations were calculated. Intrusion, avoidance, hyperarousal, and total scores from the IES-R were used along with the MVS vocational identity score and DWPS total score. To establish whether there was a difference in developmental work personality and vocational identity for individuals who reported high levels of trauma compared to those who reported low or no trauma experience, a one-way analysis of variance (ANOVA) was conducted. A high score was considered as 33 or higher (signifying the likely presence of PTSD) on the IES-R (Weiss & Marmar, 1997; Weiss, 2004). An ANOVA was also used to determine if there were differences in developmental work personality and vocational identity based on the type of trauma individuals experience, obtained in the demographics form.

Results

The relationship between trauma symptoms (as measured by the IES-R), developmental work personality (as measured by the DWPS), and vocational identity (as measured by the MVS) was investigated using Pearson r. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a significant correlation between developmental work personality and total trauma symptoms ($r = .15, p < .05$) in addition to a significant correlation between developmental work personality and intrusion ($r = .17, p < .01$). There was also a significant, negative correlation between vocational identity and total trauma symptoms ($r = -.20, p < .01$). Vocational identity was also negatively correlated with intrusion ($r = -.17, p < .05$), avoidance ($r = -.17, p < .05$), and hyperarousal ($r = -.20, p < .01$; See Table 1).
A one-way analysis of variance was conducted to explore difference in developmental work personality and vocational identity for individuals who reported high levels of trauma.
compared to those who reported low trauma experience. There was a statistically significant difference in both developmental work personality, $F(1, 211) = 4.06, p = < .05, d = .65$ and vocational identity, $F(1, 211) = 4.74, p < .05, d = .68$, for individuals who reported high levels of trauma compared to those who reported low or no trauma experience. Means and standard deviations for low and high trauma groups are given in Table 2. An ANOVA was also conducted to examine whether there were any differences in developmental work personality and vocational identity based on type of trauma. There was a statistically significant difference in vocational identity based on type of trauma $F(12, 96) = 1.96, p < .05, d = .68$, however there was no statistically significant difference in developmental work personality based on type of trauma $F(12, 88) = .56, p = .86, d = .52$. Means and standard deviations are given in Table 3.

Table 2

<table>
<thead>
<tr>
<th>Measure</th>
<th>Low-Trauma</th>
<th>High-Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWP</td>
<td>67.3</td>
<td>69.9</td>
</tr>
<tr>
<td>VI</td>
<td>10.3</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Note: DWP = Developmental Work Personality; VI = Vocational Identity
Table 3

*Means and Standard Deviations for Type of Trauma – DWP and VI*

<table>
<thead>
<tr>
<th>Type of Trauma</th>
<th>DWP</th>
<th></th>
<th>VI</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Really bad car, boat, train, airplane accident</td>
<td>67.8</td>
<td>8.3</td>
<td>9.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Really bad accident at work or home</td>
<td>67.0</td>
<td>7.0</td>
<td>4.7</td>
<td>3.2</td>
</tr>
<tr>
<td>Hurricane flood, earthquake, tornado, fire</td>
<td>69.0</td>
<td>.00</td>
<td>6.0</td>
<td>.00</td>
</tr>
<tr>
<td>Hit or kicked enough to injure – as a child</td>
<td>71.5</td>
<td>2.1</td>
<td>8.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Hit or kicked enough to injure – as an adult</td>
<td>66.0</td>
<td>.00</td>
<td>13.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Forced to have sexual contact – as a child</td>
<td>65.4</td>
<td>16.2</td>
<td>8.8</td>
<td>5.3</td>
</tr>
<tr>
<td>Forced to have sexual contact – as an adult</td>
<td>66.3</td>
<td>6.2</td>
<td>6.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Attack with a gun, knife, or weapon</td>
<td>67.0</td>
<td>11.0</td>
<td>16.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Military service</td>
<td>76.3</td>
<td>12.7</td>
<td>10.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Sudden death of a close family friend</td>
<td>65.9</td>
<td>12.3</td>
<td>8.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Seeing someone die suddenly or get badly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hurt or killed</td>
<td>74.5</td>
<td>.71</td>
<td>15.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Suddenly abandoned</td>
<td>73.2</td>
<td>10.4</td>
<td>14.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Other</td>
<td>68.8</td>
<td>6.9</td>
<td>9.3</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Discussion

The results of this study show the way in which the type of trauma a person experiences affects developmental work personality and vocational identity. The relationship between trauma
symptoms and developmental work personality along with vocational identity was also explored. High and low trauma groups were also explored and the study found significant differences in each group when examining them with developmental work personality and vocational identity. Results of the study are in line with similar studies completed, but also differ.

Results of the correlation between trauma symptoms and developmental work personality indicated that individuals with a healthier work personality also have high trauma symptoms. This finding is in line with Prescod and Zeligman’s (2018) study which also found that individuals with had high levels of trauma symptomology had greater career adaptability. Although this result was not anticipated, it is important to note that overall scores on the Developmental Work Personality Scale (DWPS) were lower (indicating a less healthy work personality) than scores from previous studies (Strauser et al., 2006). Scores on the DWPS range from 0-130 and mean scores were no higher than 76 in this study. Strauser and colleagues (2006) found mean scores of 123.9 and 113.4 for their groups and found a significant relationship between high levels of trauma and dysfunctional career thoughts. Results of the correlation also found that overall trauma symptoms along with avoidant behaviors and irritability were significantly lower in individuals with higher vocational identity.

The analysis of variance conducted found a statistically significant difference in both developmental work personality and vocational identity for individuals who reported high levels of trauma compared to those who reported low trauma experience. Vocational identity was higher for individuals who experienced low trauma compared to those who experienced high levels of trauma. Those in the low trauma group had slightly lower developmental work personalities than those in the high trauma group. Although, it is important to note that overall DWPS scores were lower in this study, the finding is in line with Prescod and Zeligman’s (2018) findings. Individuals
who experienced higher levels of trauma had more healthy developmental work personalities than those who experienced low levels of trauma; a finding that speaks to the importance of post traumatic growth after experiencing trauma (Tedeschi & Calhoun, 2004). Individuals who are able to improve their functioning better than it was prior to a trauma, are said to have experienced post-traumatic growth (Tedeschi & Calhoun, 2004), and the finding in the current study is in line with that reasoning. Our results also found that there was a statistically significant difference in vocational identity, but no statistically significant difference in developmental work personality based on type of trauma. Participants who were injured as a child, in the military, saw someone die or get injured, or suddenly abandoned had higher levels of work personalities. Those who were injured as an adult, attacked with a weapon, in the military, saw someone die or get injured, or suddenly abandoned showed higher vocational identity.

Previous studies show that trauma halts development for individuals and impacts their ability to perform career responsibilities (Morris et al., 2009). Trauma also increases negative career thoughts for individuals (Chronister et al., 2012), but the current study showed that participants with a healthier work personality also had high trauma symptoms. Day and colleagues (2017) found that counselors were better able to understand their clients after experiencing a trauma themselves. Our findings differ from previous research and highlight the importance of examining growth from trauma. Although we know trauma can have a negative impact, there is another narrative that seems to be emerging.

**Limitations**

As with most studies conducted, this one is not without its limitations. The current study was focused at a large university in the southeast. Results may have been different if the study was conducted in another part of the country. Additionally, the majority of the sample was comprised
of seniors in college. Trauma may reveal itself differently or responses on the measure might have changed if the population was more balanced in regard to class. The sample was also majority female. Similar to this fact, that majority of participants were seniors, the responses on each of the assessments may have been different if there were more males who participated. Information regarding type of trauma was self-reported which could have increased response bias. Lastly, all assessments were given online. In previous studies (Strauser et al., 2006) the assessments were given face-to-face, during class time. Some participants may have rushed through the questions when taking the assessment online. The average time taken to complete all of the assessments was approximately 45 minutes with a range of 30-60 minutes. With more than 60 items to respond to, participants on the lower end of the range, may have rushed through some of the questions.

**Implications and Directions for Future Research**

Trauma can negatively impact a person’s self-concept, self-efficacy, and skills to perform career-related tasks (Morris et al., 2009). Examining a self-concept or self-efficacy scale in addition to the MVS, DWPS, and IES-R may provide meaningful results about trauma, career, and the way one views themselves. Another assessment that may be beneficial to use is the Career Thoughts Inventory (CTI; Sampson et al., 1996a; Sampson et al., 1996b). The CTI is a 48-item scale that identifies dysfunctional career thoughts. Work personality and vocational identity provide useful information about the connection between career and trauma, but exploring dysfunctional career thoughts may add to the understanding of the connection.

Trauma does not discriminate. People from various backgrounds with various kinds of careers experience trauma. Given the negative effects trauma can have on career development, the results of this study show the importance of continuing this research. Counselors, counselor educators, employees, and employers could all benefit from knowledge about how trauma effects
vocational identity. Examining differences between ethnic groups may yield insightful results as people tend to cope differently. Longitudinal studies may also provide valuable information regarding how trauma may influence vocational identity. Conducting interviews or focus groups with students who have experienced trauma could allow for deeper and richer information.
References


