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# The Impact of Trauma on Memory Processes and Psychological Functioning of Young Adults

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ABSTRACT: This correlational study delves into the effects of trauma on memory processing and psychological functioning in young adults. The Impact of Event Scale, Functional Impairment Scale, and Psychological Well-Being Scale were utilized to gather data from 100 individuals. The research findings reveal substantial associations between trauma characteristics, functioning limitations, and psychological well-being. Specifically, trauma exhibits a positive correlation with impairment in familial, job-related, and academic domains, while psychological well-being demonstrates a negative correlation with trauma components. Moreover, regression analyses highlight the predictive value of functional impairment and well-being on trauma outcomes. These results underscore the intricate interplay between trauma, memory processes, and psychological functioning, emphasizing the need for comprehensive interventions aimed at trauma recovery in young adults. The study's findings help to deepen our understanding of the long-term effects of trauma on young adults' cognitive and emotional development. The strong connections shown between trauma features, functional impairment, and psychological well-being shed light on the intricate interplay of these components. These findings have significant implications for the creation of targeted interventions and support systems that acknowledge the various manifestations of trauma events and their varied impact on young adults' lives. Overall, the study emphasizes addressing the multidimensional impact of trauma on memory systems and psychological functioning. The findings highlight the necessity for a holistic approach to trauma rehabilitation, considering the implications for multiple domains of functioning and well-being in young adults.

**KEYWORDS:** Trauma, Memory Processes, Psychological Functioning, Young Adults

# I. INTRODUCTION

**Trauma,** a psychological response to threatening events, can manifest as acute, chronic, complex, or secondary trauma. Its enduring effects can lead to conditions like post-traumatic stress disorder (PTSD), marked by intrusive memories, avoidance, depression, and hypervigilance. Memory processes, crucial for cognition and learning, involve encoding, storage, and retrieval. Encoding methods include visual, acoustic, semantic, and tactile, with information transitioning from short-term to long-term memory, impacting retrieval efficacy.

Psychological functioning encompasses emotional well-being and functionality, influenced by adversity. Key components of psychological well-being include self-acceptance, life purpose, autonomy, positive social relationships, environmental mastery, and personal development. Optimizing psychological function involves finding meaning, fostering optimism, and cultivating social support, contributing to overall mental health and adaptive behaviors.

Several studies shed light on various aspects of trauma-related distress and its effects on young adults. McLaughlin, Hatzenbuehler, and Hilt (2009) delve into coping mechanisms, highlighting rumination as a mediator between trauma exposure and distress, while emphasizing the protective role of social support against distress. Filipas and Ullman (2006) focus on gender differences in posttraumatic stress symptoms among young adults, revealing that women tend to exhibit higher levels of PTSD symptomatology compared to men following traumatic events. Dube et al. (2006) explore the impact of childhood trauma on substance abuse, finding a significant correlation between adverse childhood experiences, such as abuse and neglect, and an increased risk of substance abuse later in life. Smith-Osborne and Greene (2010) emphasize cultural considerations in trauma treatment, advocating for culturally sensitive therapies, particularly for young adults from racial and ethnic minority backgrounds. Finally, Wilson, Scarpa, and Muratori (2019) study longitudinal trajectories of trauma responses over time and underscoring the importance of social support networks and coping strategies in promoting resilience among affected individuals. These studies collectively contribute to a deeper understanding of the complex interplay between trauma, coping mechanisms, and resilience in young adults.

This study aims to fill a critical gap in understanding how trauma affects memory processes and psychological functioning among young adults. While it's widely acknowledged that trauma can have profound and enduring effects

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on individuals, the specific mechanisms underlying these impacts remain insufficiently explored. Given the severe consequences of traumatic experiences on mental health and overall well-being, it's imperative to elucidate the relationship between trauma, memory processes, and psychological functioning. Such insights could inform the development of effective interventions and treatments for trauma-related disorders and help identify factors influencing resilience and recovery. Methodologically, rigorous scientific investigation using a combination of qualitative and quantitative research methods is proposed to gather comprehensive data on memory-related symptoms experienced by trauma survivors. This study may also shed light on specific subgroups or populations particularly vulnerable to trauma-related memory problems, potentially paving the way for the development of preventive strategies and early interventions aimed at mitigating the negative effects of trauma on memory and psychological well-being.

# **II. METHODOLOGY**

**OBJECTIVE:** To study the impact of trauma on memory processes and psychological functioning of young adults. **HYPOTHESIS:** 

- Trauma impacts the memory processes and psychological functioning of young adults negatively.
- The impact of trauma on memory and psychological functioning varies based on the type and severity of the trauma.
- The timing of trauma exposure influences memory and psychological outcomes.

# SAMPLE:

- Sample population: Young adults between the age of 18-25 years.
- Sample size: 100 (46 females, 3 non-binary and 51 males)
- Sampling technique: Purposive sampling.

### TOOLS:

**1. IMPACT OF EVENT SCALE – REVISED (IES):** The impact of event scale is a widely used psychometric scale for assessing PTSD symptoms. It was developed by Daniel S. Weiss; it consists of 22 items that measure the diagnostic criteria for PTSD. The IES-R demonstrates impressive internal consistency in terms of the intrusion and avoidant subscales and other reliability indices such as omega, composite reliability, and maximal reliability support its robustness. The IES-R has good construct validity and is used to assess PTSD symptoms across various cultures worldwide.

**2. PSYCHOLOGICAL WELLBEING SCALE (PWB):** The Psychological Well-Being Scale (PWB) is a valuable tool for assessing various dimensions of psychological well-being. Developed by Carol Ryff, the PWB scale is based on a multidimensional model of psychological well-being. Ryff's model encompasses six dimensions that define well-being:

- 1. Autonomy: Feeling in control of one's life.
- 2. Environmental Mastery: Ability to manage life's challenges.
- 3. Personal Growth: Continual development and self-improvement.
- 4. Positive Relations with Others: Quality of social connections.
- 5. Purpose in Life: Sense of meaning and direction.
- 6. Self-Acceptance: Positive self-regard.

### **Reliability and Validity:**

Internal consistency ( $\alpha$ ) of the six scales ranged from 0.86 to 0.93. Test-retest reliability coefficients over six weeks ranged from 0.81 to 0.88. The PWB scale is considered a valid and reliable instrument for assessing psychological well-being.

**3. FUNCTIONAL IMPAIRMENT SCALE (WFIRS):** This tool is designed to assess functional impairment across various domains. Developed by Margeret D. Weiss and colleagues, it aims to capture the impact of mental health conditions on daily functioning. The WFIRS evaluates functional impairment in multiple areas, including:

- 1. Family
- 2. School
- 3. Life Skills
- 4. Peer Relations
- 5. Self-concept
- 6. Risk Behaviors

Inter-rater reliability coefficients range from 0.86 to 0.88. The scale shows strong construct validity when compared with other measures, such as the Barthel Index (ICC > 0.83).

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# **PROCEDURE:**

The study was designed to assess the impact of trauma on memory processes and psychological functioning of young adults. Clear criteria were established for selecting participants based on the purpose of the study and then using the established criteria, participants meeting the specific requirements outlined for the study were selected. Participants were given a set of questionnaires carrying the **Impact of Event Scale- revised (IES-R)**, the **Psychological Well-being Scale (PWS)**, and the **Functional Impairment Scale (WFIRS)**. Scales were distributed to everyone, and instructions were properly given for each scale. After the data collection, scoring was done for each item in all three scales. Afterwards, SPSS software was used for further calculation to find the results. After the calculations and results, discussions and implications were written.

# **III. RESULTS**

**TABLE. 1:** Mean Value (M) and Standard Deviation (SD) of the Impact of Event Scale (IES), the Functional Impairment Scale (WFIRS), and The Psychological Well-Being Scale (PWB), N=100

TABLE. 1						
DESCRIPTIVE STATISTICS OF IMPACT OF EVENT SCALE						
DIMENSIONS	MEAN	STANDARD DEVIATION				
AVOIDANCE	13.8600	6.91802				
INTRUSION	9.9400	5.73633				
HYPERAROUSAL	13.8700	7.12749				
DESCRIPTIVE STATIST	ICS OF THE FUNCTION	AL IMPAIRMENT SCALE				
FAMILY	14.7300	5.13033				
WORK	18.5600	9.06243				
SCHOOL	19.5100	8.42375				
SELF CONCEPT	11.7000	4.65908				
LIFESKILLS	23.7400	7.49629				
SOCIAL	17.2100	6.16981				
RISK	19.6800	10.93219				
DESCRIPTIVE STATIST	ICS OF THE PSYCHOLO	GICAL WELL-BEING SCALE				
AUTONOMY	24.5300	5.39819				
ENVIRONMENTAL MAST	TERY 25.1100	5.35015				
PERSONAL GROWTH	25.2100	5.27869				
POSITIVE RELATIONS	26.7900	5.71953				
PURPOSE IN LIFE	24.7400	5.48942				
SELF ACCEPTANCE	25.6600	5.13499				

TABLE.2: Correlation between the Impact of Event Scale (IES) and the Functional Impairment Scale (WFIRS)

TABLE.2							
Impact of event scale correlation with Functional impairment scale							
Impact of Event	Functional	Impairment S	Scale				
Scale (IES)	(WFIRS)	(WFIRS)					
	Family	Work	School	Self-	Life-	Social	Risk
				concept	Skills		



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Avoidance	.377**	.176	.231*	.539**	.414**	.420**	.172
Hyperarousal	.459**	.243*	.213*	.509**	.449**	.415**	.156
Intrusion	.434**	.171	.162	.508**	.398**	.451**	.133
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

# **Correlation between IES and WFIRS:**

• The Impact of Event Scale (IES) shows significant positive correlations with various dimensions of the Functional Impairment Scale (WFIRS), such as family (r = 0.377, p < 0.01), work (r = 0.176, p < 0.05), school (r = 0.231, p < 0.05), self-concept (r = 0.539, p < 0.01), life-skills (r = 0.414, p < 0.01), and social (r = 0.420, p < 0.01).

• This suggests that higher levels of trauma are associated with greater functional impairment across various life domains.

TABLE.3Correlation between the Functional Impairment Scale (WFIRS) and the Psychological Well-being Scale (PWB)

TABLE.3							
Functional Impai	Functional Impairment Scale correlation with Psychological Well-being Scale						
Functional Impairment Scale (WFIRS)	Psychological Well-Being Scale (PWS)						
	Autonomy	Environment	Personal	Positive	Purpose in	Self-	
		al Mastery	Growth	Relations	Life	Acceptance	
Family	.058	026	002	148	032	082	
Work	.010	102	192	257**	.044	048	
School	.114	.135	.210*	.022	.151	.163	
Self-concept	.134	.062	.086	.039	099	069	
Life skills	.038	.065	.114	036	.006	.039	
Social	.158	.119	.135	.001	.058	.019	
Risk	131 .000004167 .068066						
<ul><li>**. Correlation is significant at the 0.01 level (2- tailed).</li><li>*. Correlation is significant at the 0.05 level (2- tailed).</li></ul>							

## **Correlation between WFIRS and PWB:**

• The Functional Impairment Scale (WFIRS) exhibits significant correlations with different dimensions of the Psychological Well-being Scale (PWB). Notable associations include work with positive relations (r = -0.257, p < 0.01) and school with personal growth (r = 0.210, p < 0.05).

• These correlations suggest that higher levels of functional impairment are associated with lower levels of psychological well-being in certain domains.

TABLE.4 Correlation between the Psychological Well-Being Scale (PWB) and the Impact of Event Scale (IES)

TABLE.4						
Psychological Well-Being Scale correlation with Impact of Event Scale						
Psychological Well- Impact of Event Scale						
Being Scale (PWB)	(IES)					
	Avoidance	Hyperarousal	Intrusion			
Autonomy	.232*	.199*	.293**			
Environmental Mastery	.254*	.179	.272**			
Personal Growth	.179	.139	.199*			

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Positive Relations	.137	.127	.191			
Purpose in Life	.055	.046	.122			
Self-Acceptance	.080	.111	.143			
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2- tailed).						

# **Correlation between PWB and IES:**

• The Psychological Well-being Scale (PWB) demonstrates significant correlations with the Impact of Event Scale (IES). For instance, avoidance shows a positive correlation with autonomy (r = 0.232, p < 0.05), hyperarousal with environmental mastery (r = 0.254, p < 0.05), and intrusion with personal growth (r = 0.199, p < 0.05).

• These correlations suggest that higher levels of psychological well-being are associated with lower levels of trauma-related symptoms.

### **REGRESSION ANALYSIS**

Regression analyses were used to investigate the relationship between trauma-related symptoms, psychological wellbeing, and functional impairment in young adults. Two models were tested: one with psychological well-being as independent variables and the other with functional impairment as independent variables.

**TABLE.5** Regression analysis on the dependent variables of the Impact of Event scale and independent variables of the Psychological Well-being scale.

MODEL	R	R SQUARE	ADJUSTED R SQUARE
AVOIDANCE	.342 <sup>a</sup>	.117	.060
HYPERAROUSAL	.244 <sup>a</sup>	.059	001
INTRUSION	.339 <sup>a</sup>	.115	.058

The psychological well-being model captures a substantial amount of variability in avoidance ( $R^2 = 0.117$ ) and intrusion ( $R^2 = 0.115$ ), but a smaller percentage in hyperarousal ( $R^2 = 0.059$ ). However, the modified R-squared values indicate that the models have low descriptive ability for these traumatic symptoms.

**TABLE.6** Regression analysis on the dependent variables of the Impact of Event scale and independent variables of the Functional Impairment scale

MODEL	R	R SQUARE	ADJUSTED R SOUARE
AVOIDANCE	.597 <sup>a</sup>	.357	.308
HYPERAROUSAL	.601 <sup>a</sup>	.361	.313
INTRUSION	.578 <sup>a</sup>	.334	.284

The functional impairment model explains a significant amount of variability for three trauma-related symptoms: avoidance ( $R^2 = 0.357$ ), hyperarousal ( $R^2 = 0.361$ ), and intrusion ( $R^2 = 0.334$ ). The modified R-squared values show that these models reflect the data well.

### **IV. CONCLUSION**

This research provides valuable insights into the impact of trauma on memory processes and psychological functioning among young adults. Through correlational analyses and regression modeling, it was demonstrated that trauma-related symptoms, including avoidance, hyperarousal, and intrusion, are significantly associated with both psychological wellbeing and functional impairment. The findings suggest that trauma negatively affects memory processes and psychological functioning, with varying degrees of impact depending on the type and severity of the trauma. Additionally, the timing of trauma exposure emerged as a significant factor influencing outcomes. These results underscore the importance of comprehensive interventions that address both psychological well-being and functional impairment in trauma recovery efforts among young adults. By understanding the complex interplay between trauma, memory processes, and psychological functioning, practitioners can develop more effective strategies to support individuals in their healing journey. Moving forward, further research is needed to explore additional factors that may

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influence the impact of trauma, as well as to evaluate the long-term effects of trauma interventions. By advancing our understanding of trauma and its consequences, we can better advocate for policies and practices that promote resilience and well-being among those affected by trauma.

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