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Cognitive Processing and Post-Traumatic Symptoms among two First Responders Exposed to Terrorist Attacks: A Clinical Case Study Using the Rorschach Inkblot Test (Exner Method)

المعالجة المعرفية والأعراض النفسية لما بعد الصدمة لدى مستجيبين أوليين متعرضين لهجمات إرهابية: دراسة حالة باستخدام اختبار الرورشاخ (منهج اكسنر)

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Abstract:

This clinical case study aims to explore cognitive processing and post traumatic symptoms in two first responders who survived terrorist attacks. The research was conducted in a clinical practice context and employed a qualitative approach grounded in psychodynamic and cognitive frameworks.

Three instruments were used: the Rorschach Inkblot Test (Exner Comprehensive System), the PTSD Checklist for DSM-5 (PCL-5), and a non-directive exploratory clinical interview. Results reveal a significant intrusion syndrome in both participants, marked by vivid re-experiencing of traumatic events through flashbacks, nightmares, and sensorimotor symptoms, severely disrupting their cognitive and emotional balance.

The Rorschach findings highlight a predominant under-incorporative scanning style, reflecting hasty and superficial cognitive processing. Both subjects displayed cognitive rigidity, weak attentional flexibility, and a tendency toward avoidance, with L-index scores of 1.55 and 4.50 respectively. These traits contributed to an ineffective integration of trauma-related information, impeding resilience-building processes.

Overall, the study confirms that poor cognitive plasticity and avoidance-based coping hinder the assimilation and accommodation processes essential

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for trauma recovery. These deficits likely obstruct resilient adaptation, supporting theoretical models by Horowitz (1986) and Brillon (2004) on post-traumatic cognitive processing.

Keywords: *Cognitive Processing; Psychological Resilience; PTSD; First Responders; Terrorism.*

ملخص :

تهدف هذه الدراسة العيادية إلى دراسة سيرورة معالجة المعلومات والاعراض الصدمية لدى مستجيبين أوليين نجيا من اعتداءات إرهابية من خلال اختبار الرورشاخ.

أجريت الدراسة في إطار الممارسة العيادية، واعتمدت على مقاربة نوعية تستند إلى الأطر النفسية الديناميكية والمعرفية.

تم استخدام ثلاثة أدوات بحث: اختبار رورشاخ بنظام مندمج (إكسنر)، مقياس اضطراب ما بعد الصدمة(PCL-5) ، والمقابلة العيادية غير الموجهة. كشفت النتائج عن وجود أعراض اقتحامية لدى المبحوثين، تتجلى في استرجاع التجربة الصادمة من خلال الكوابيس، صور ذهنية، والأعراض الحسية الحركية، مما يُحدث اضطرابًا كبيرًا في التوازن المعرفي والعاطفي.

أظهرت بيانات اختبار رورشاخ أن كلا المشاركين يعتمدان نمط معالجة معرفية سطحي وسريع، مع صلابة معرفية وضعف في مرونة الانتباه، إضافة إلى توجه واضح نحو التجنب، كما يتضح من مؤشّر L الذي بلغ لدى الحالتين 1.55 و4.50 على التوالي. هذه السمات تعيق عملية التكامل المعرفي للمحتوى الصدمي، مما يحد من بناء المرونة النفسية.

كما تؤكد كذلك هذه النتائج على أن الضعف في المرونة المعرفية والاعتماد على استراتيجيات التجنب يعوق عمليات الاستيعاب والتكيّف الضرورية للتعافي من الصدمة، وهو ما يتماشى مع النماذج النظرية لهوروفيتز (1986) وبرّيون (2004) حول معالجة المعلومات بعد الصدمة..

الكلمات المفتاحية : *معالجة معرفية؛ الارجاعية؛ اضطراب ضغط ما بعد الصدمة؛ مستجيبون أوائل ؛ إرهاب.*

Introduction

Epidemiological research has established that Post-Traumatic Stress Disorder (PTSD) has reached a pervasive global prevalence, driven in part by the increasing incidence of interpersonal violence worldwide, including armed conflicts, terrorism, and other acts of aggression. Within this global context, the history of prolonged violence endured by Algeria during the so-called “Black Decade” remains a critical area of concern.

The national security crisis that unfolded between 1991 and 2000 has captured the attention of numerous experts, particularly within the psychological

sciences. Notably, large-scale investigations—such as the study conducted between 1997 and 2002 in the most heavily impacted regions (e.g., the Wilaya of Blida)—revealed that many victims exhibited symptoms consistent with PTSD, meeting at least three of the diagnostic criteria outlined for the disorder. In a similar vein, Hadji (2003) observed that intentional violence, while a relatively recent phenomenon in Algeria at the time, had engendered significant psychological distress characterized by complex traumatic symptomatology. In response, various organizations and civil society groups established psychological support systems to facilitate emotional healing, mourning processes, and the cultivation of resilience among survivors.

However, a distinct yet equally impacted population—first responders, including military personnel, police officers, communal guards, and firefighters—remained largely underserved and without access to such psychological support. Due to the inherently high-risk nature of their roles and their repeated exposure to catastrophic events, many continue to suffer from chronic, unresolved post-traumatic symptoms shaped by a range of psychosocial factors. This underrecognized vulnerability has prompted the present investigation. The current study seeks to examine the cognitive mechanisms underlying PTSD and resilience within this specific group. Furthermore, it aims to serve as a foundation for future research and the development of tailored, evidence-based psychotherapeutic programs designed to meet the psychological needs of this vulnerable and at-risk population

This underrecognized vulnerability has prompted the present investigation, which seeks to elucidate the cognitive mechanisms underlying PTSD and psychological resilience within this specific cohort of first responders. By analyzing these processes, the study aims to establish a scientific foundation for future research and the implementation of tailored, evidence-based psychotherapeutic interventions.

Ultimately, this work is designed to address the complex psychological needs of this underserved and at-risk population, fostering adaptive recovery in the aftermath of intentional violence.

1. Literature review

Post-Traumatic Stress Disorder (PTSD) is recognized as a mental health condition characterized by a delayed and/or persistent psychological response to exposure to highly distressing events. Such events are typically catastrophic or life-threatening and are likely to elicit intense psychological distress in the majority of individuals (Senon et al., 2013). The psychological sequelae of traumatic exposure often manifest through a complex interaction of cognitive and emotional disturbances, leading to impairments across executive, perceptual, and affective domains.

To investigate the psychological mechanisms underlying PTSD, researchers have employed a variety of psychometric and projective assessment instruments. Among these, the Rorschach Inkblot Test occupies a distinctive position due to its capacity to assess cognitive and emotional functioning within an integrative and dynamic framework. A substantial body of empirical research (e.g., Bersoff, 1970; Salley & Tieling, 1984; van der Kolk & Ducey, 1984, 1989; Souffront, 1987; Hartman et al., 1990; Swanson et al., 1990; Burch, 1993; Levin, 1993; Sloan et al., 1995, 1996; Parent, 2011) has consistently identified characteristic patterns in individuals with PTSD, including heightened emotional tension, impaired affect regulation, perceptual distortions, and the intrusion of traumatic imagery during projective tasks.

These intrusive mental images, commonly classified within the intrusion and re-experiencing symptom cluster of PTSD, tend to emerge during states of reduced cognitive vigilance, such as sleep onset or relaxation (Horowitz, 1993). Horowitz (1986) conceptualized this phenomenon as a disruption in information processing, whereby traumatic material remains excessively activated and insufficiently integrated into existing cognitive schemas. This failure of assimilation may result in repetitive, involuntary mental content that overwhelms cognitive control mechanisms (Goldfinger et al., 1998).

According to Horowitz's (1986) information-processing model, trauma overwhelms pre-existing cognitive schemas. Psychological recovery requires either assimilation (integrating traumatic information into existing schemas) or accommodation, which involves modifying schemas to incorporate the new reality. When these processes fail, traumatic material remains unprocessed in a "raw" form and re-emerges as intrusive imagery and affect.

Within this context, the Rorschach Inkblot Test - by virtue of its unstructured format and perceptual ambiguity - offers a particularly relevant framework for examining trauma-related disruptions. Its administration requires the temporary suspension of concrete reality testing and the engagement of internal imagery, thereby revealing fundamental processes involved in perception, mediation, ideation, and cognitive control (Schafer, 1954).

In the present study, specific indices such as Lambda (L), OBS, HVI, Zf, W:D:Dd, and W:M are used to assess the examinees' motivational engagement with the stimuli. Measures including Developmental Quality (DQ), Zd, Perseveration (PSV), and the Sequence of Locations provide insight into the efficiency, organization, and flexibility of cognitive processing (Exner, 1993). Additional indicators such as the total number of responses (R), the presence of blends, and the Experience Actual (EA) ratio offer valuable information regarding emotional resources and adaptive capacity (Gormally, 2008).

This study aims to formulate hypotheses concerning participants' potential for adaptive coping and psychological resilience. Cognitive flexibility, defined as the ability to reframe, reinterpret, and integrate trauma-related experiences, has been identified as a core component of resilience (Iacoviello & Charney, 2014). This capacity involves assigning meaning to traumatic events and incorporating them into a coherent autobiographical narrative, thereby facilitating psychological integration and post-traumatic adaptation.

Such adaptive processes are closely linked to higher-order cognitive competencies, particularly in information processing and decision-making. Santhosh and Annalakshmi (2016) demonstrated that individuals with greater resilience tend to exhibit more efficient cognitive processing and higher levels of cognitive investment, enabling them to impose structure, coherence, and meaning on their internal and external environments.

Beyond symptom reduction, contemporary models conceptualize recovery from trauma as a dynamic and multidimensional process involving information processing, meaning-making, and resilience. Resilience is understood not as the absence of distress, but as the capacity to maintain or regain adaptive functioning in the face of adversity (Bonanno, 2004), supported by individual cognitive resources and environmental protective factors (Masten, 2014).

For example, Brillon (2004) emphasizes cognitive flexibility and emotional regulation as central mechanisms underlying resilience following trauma. Consistent with this perspective, empirical Rorschach studies have repeatedly shown that PTSD is associated with elevated intrusion, perceptual distortions, and rigid or constricted processing styles (van der Kolk & Ducey, 1984; Hartman et al., 1990).

Within the Rorschach Comprehensive System, indices such as Lambda (L), Blends, Experience Actual (EA), and D scores serve as indirect markers of adaptive functioning. Higher proportions of blends and adequate EA levels suggest cognitive flexibility and emotional resources conducive to resilience, whereas elevated Lambda values and reduced EA are indicative of avoidant processing and constrained coping strategies (Gormally, 2008; Santhosh & Annalakshmi, 2016).

Building on these theoretical and empirical foundations - particularly Horowitz's model, which posits that individual variations in PTSD symptomatology may stem from unresolved intrapsychic conflicts and deficits in information assimilation—the present study addresses the following research questions:

• What are the defining characteristics of cognitive processing, as reflected in Rorschach protocols, in two first responders exposed to complex terrorism-related trauma?

• To what extent do their projective responses indicate the presence of psychological resilience or potential for post-traumatic growth?

2. Methodology

For the purposes of this research, two cases were selected from among clients diagnosed with complex post-traumatic stress disorder, chosen within the framework of our clinical practice in 2020. The cases involve two Algerian first responders who were victims of terrorism and had experienced repeated acts of intentional violence in the preceding years. The following table outlines the specific characteristics of these two research subjects:

Table 1.- Specific Characteristics of the Two Research Subjects

Case	Age	Traumatic event nature	Medical history
Youcef	49	1. Victim of a road traffic accident in 1984. 2. Victim of a terrorist attack in 1994. 3. Witnessed special operations as part of his professional duties, during which several of his colleagues lost their lives (between 1995 and 2000).	**1.** Cardiac problem in 2005 following the events he experienced **2.** Psychiatric history
Anouar	51	**1.** Witnessed a bomb explosion in 1995. **2.** Survivor of an earthquake in 2003. **3.** Witnessed a bomb explosion in 2007.	Chronic illnesses (hypertension and diabetes diagnosed in 2008)

2.1. Research tools

To conduct the present study, a set of complementary clinical assessment tools was employed to enhance the objectivity and methodological rigor of the findings. The instruments used were as follows:

2.1.1 Exploratory Non-Directive Clinical Interview.

This qualitative method was designed to gather in-depth clinical data and to facilitate an understanding of the participants' cognitive processing mechanisms through systematic analysis of discourse content, thematic organization, and narrative coherence.

2.1.2 Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5).

The PCL-5 is a standardized self-report measure used to assess the presence and severity of PTSD symptoms in accordance with DSM-5 diagnostic criteria.

2.1.3 Rorschach Inkblot Test.

The Rorschach Inkblot Test was administered in accordance with John Exner's Comprehensive System (1993). All protocols were scored and interpreted following the standardized procedures and interpretive guidelines of this system to ensure reliability and validity.

Within the framework of the Rorschach Comprehensive System, the test was used to operationalize cognitive resources associated with psychological resilience through the following indices:

- Lambda (L): An index of cognitive avoidance and perceptual oversimplification in response to environmental demands.
- Experience Actual (EA): Reflects the overall quantity of organized psychological and emotional resources available for coping with stress.
- Blends Ratio: Serves as an indicator of cognitive complexity and the capacity to integrate multiple affective states simultaneously, a key component of resilient functioning.
- Zd Score: Assesses scanning efficiency, reflecting the degree to which cognitive processing is incorporative or sub-incorporative.

The two subjects were selected after obtaining their informed consent. The assessment tools were administered in the order listed above, beginning with a clinical interview followed by the administration of the PCL-5. This initial phase aimed to gather the data necessary for our analysis and to confirm the presence of post-traumatic stress disorder using the aforementioned scale. Subsequently, the Rorschach test was administered during a separate session.

3. Analysis of results

The results obtained during this investigation are presented as follows:

3.1. Clinical Interview:

The discourse analysis of Youcef's case reveals a constellation of post-traumatic symptoms and narrative patterns predominantly centered on his traumatic experiences. He appeared unable to inhibit the recurrent recounting of these events, which he described with marked emotional intensity, including episodes of crying, heightened anxiety, and a persistently dysphoric affect. These manifestations appeared to exacerbate his psychological distress and intensify feelings of guilt related to the deaths of his colleagues during

professional operations conducted between 1995 and 2000, consistent with survivor's guilt. He stated: *"Disturbing memories constantly intrude upon my thoughts and at times disconnect me from reality—I simply cannot forget them."*

A comparable pattern emerged in Anouar's case. His discourse was strongly anchored in the bomb explosions of 1995 and 2007 and was characterized by vivid, detailed recollections of the scenes, including descriptions of clothing, temporal markers, environmental conditions, and the physical state of the victims' bodies. He reported: *"At night, I can no longer sleep—these images replay automatically."* He further explained that visual cues - such as shock absorbers or mechanical car parts - trigger intrusive recollections of a young girl disfigured by shrapnel during a bomb explosion in eastern Algiers. These recollections were accompanied by pronounced somatic sensations, notably coldness and numbness in his lower limbs.

Analysis of both narratives revealed the following shared cognitive and experiential features:

- The presence of recurrent, looping mental imagery that intrudes upon ongoing thought processes;
- Exceptionally precise and detailed recall of the temporal and sequential aspects of traumatic events;
- Diminished cognitive control and involuntary loosening of thought regulation, including dissociative experiences and flashbacks, leading to intrusive recollections;
- A marked thematic restriction of traumatic focus, as both participants exclusively referenced events involving intentional interpersonal violence, with no spontaneous mention of other significant traumatic experiences (e.g., a road traffic accident in Youcef's case, and exposure to the 2003 Boumerdes earthquake following a house collapse in Anouar's case).

The discourse characteristics observed in both cases are consistent with Horowitz's (1986) information-processing model of trauma. According to this framework, traumatic experiences that overwhelm existing cognitive schemas remain insufficiently assimilated or accommodated, resulting in the persistent activation of trauma-related representations. In both Youcef and Anouar, the repetitive and intrusive nature of traumatic imagery suggests a failure in the integration of traumatic material into autobiographical memory. Instead, these

experiences appear to persist in an unprocessed state, re-emerging automatically when cognitive control is reduced or when external perceptual cues resemble elements of the original trauma.

3.2. PCL – 5

Table 2.- PCL 5 scale scores

Case	Total score	Traumatic event nature	Intrusive Symptoms Score	Avoidance Symptoms Score	Negative Alterations in Cognitions and Mood Symptoms	Marked Alterations in Arousal and Reactivity Symptoms
Youcef	60	16	24	12	24	8
Anouar	56	16	9	15	9	16

Based on the findings summarized in the preceding table, both participants exhibit symptom profiles consistent with a diagnosis of Post-Traumatic Stress Disorder (PTSD). This diagnostic formulation is primarily supported by their scores on the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5), both of which exceed the established clinical cutoff. Specifically, Youcef obtained a score of 60, and Anouar a score of 56, substantially surpassing the threshold of 38.

Beyond the quantitative cutoff, the diagnostic criteria are further supported by the pervasive presence of multiple PTSD symptom clusters. Both individuals demonstrate prominent intrusion symptoms as well as significant negative alterations in cognition and mood. In addition, Anouar exhibits marked symptoms of hyperarousal and heightened reactivity, suggesting a more pronounced activation of this symptom dimension.

3.3. Rorschach Inkblot test

With regard to the Rorschach assessment, the present investigation focuses on two primary domains: cognitive processing and indices related to psychological resilience. These dimensions are examined through specific Rorschach variables and are presented in detail in the following tables :

Table 3.- Cognitive Processing component

Variables of the "Cognitive Processing" Component											
Case	L	EB	OBS	HVI	Zf	W/D/Dd	W/M	Zd	PSV	DQ+	DQv, v/+
Youcef	1.55	0 :5.5	Na	Ns	7	8 : 16 : 6	8 : 0	- 7	2	1	4
Anouar	4.50	0 :1.5	Na	Ns	7	5 : 16 : 1	5 : 0	- 6	2	2	2

Table 4. Resilience-related variables in the Rorschach test

Case	R	Blends	EA	D
Youcef	28	1	6	0
Anouar	22	4	1,5	-2

According to the Rorschach Interpretation Manual, the following interpretations regarding cognitive processing and resilience have been deduced for the two cases:

A . Youcef's case

Youcef demonstrates an avoidant cognitive style characterized by an economical and constricted approach to cognitive processing. He appears cautious and distrustful when confronted with ambiguity, tending to minimize engagement with complex or emotionally charged stimuli. This style is reflected in a pronounced focus on narrowly circumscribed perceptual details, as evidenced by a predominance of small-detail (Dd) responses. His scanning activity is sub-incorporative, indicating a hurried and unsystematic approach to stimulus exploration that increases the likelihood of overlooking salient elements within the perceptual field.

Consequently, his cognitive effort and processing strategies related to problem-solving and decision-making appear inconsistent, particularly in situations involving novelty or uncertainty. This pattern suggests inefficiencies in cognitive processing that compromise adaptive functioning and undermine psychological resilience. Moreover, Youcef appears to possess limited cognitive–emotional resources, as indicated by a markedly low proportion of Blends (BLD% = 0.04) and a substantially reduced Experience Actual score (EA

= 6, compared to an expected normative value of approximately 14.5). According to Gormally (2008), such profiles are associated with diminished adaptive capacity and restricted coping strategies when confronting stressful or demanding life events.

B. Anouar's case

Anouar exhibits a conformist and constricted approach to processing new information, frequently restricting his exploration to a superficial level. He demonstrates a tendency to conserve cognitive effort and to avoid complexity. Similar to Youcef, his scanning activity is sub-incorporative, reflecting a hurried and unsystematic exploration of the stimulus field that often results in the omission of salient or integrative elements. In addition, Anouar appears to set demands for himself that exceed his current functional capacities, suggesting a discrepancy between perceived expectations and available cognitive resources.

Notably, Anouar shows marked difficulty in shifting attentional focus during cognitive processing, and his avoidant style significantly constrains overall psychological functioning. With regard to resilience, these findings indicate substantial difficulty in initiating adaptive coping processes. This rigidity in responding to stressful situations is reflected in an extremely low Experience Actual score (EA = 1.5, well below the normative reference of approximately 14.5). Furthermore, his capacity to regulate affective distress and recover from depressive states appears particularly fragile. Weak control mechanisms, as evidenced by a negative D score (D = −2), further contribute to severe impairments in problem-solving and adaptive decision-making.

4. Discussion

The results of this study clearly indicate that the traumatic events experienced by both subjects have led to significant psychological fragility, primarily characterized by a severe intrusion syndrome. This syndrome profoundly disrupts their cognitive processes, forcing them to re-experience the violence with the same emotional intensity and sensory overwhelmingness as the original event. This "flooding" of consciousness leads to extreme distress and a state of chronic autonomic arousal. As established in traumatology literature, this manifests through vivid flashbacks, nightmares, and somatic experiences that bypass conscious control.

4.1 Cognitive Rigidity and Processing

The findings corroborate the hypothesis that traumatic imagery breaches the thought process because the influx of stressful information overwhelms the subjects' adaptive capacity. Specifically, both subjects demonstrate a sub-incorporative scanning style (Zd < -3.0)—a rapid and superficial investigation of the stimulus field. This hasty processing leads to erroneous mediation and irrelevant behaviors. These characteristics highlight a deficiency in cognitive plasticity; the subjects exhibit a notable lack of flexibility and a degree of rigidity in both cognitive processing and decision-making.

4.2 The Cycle of Failed Assimilation

This maladaptive processing style represents a significant impediment to recovery. According to Horowitz's (1986) model, individuals possess an intrinsic drive to process information until integration is achieved via assimilation (fitting trauma into existing schemas) or accommodation (restructuring schemas).

In these cases, the integration process has stalled. Because the subjects cannot effectively analyze the details of their experience, the traumatic data remains in a "raw form" within the unconscious. The subjects then oscillate between intrusive re-experiencing and an avoidant phase (evident in the high Lambda scores: Youcef, L = 1.55; Anouar, L = 4.50) to regulate emotional flooding. While high Lambda serves as a short-term protective mechanism, it becomes a long-term barrier to meaning-making, a central tenet of resilience (Iacoviello & Charney, 2014).

4.3 Barriers to Resilience-Building

The Rorschach data, particularly for Youcef, reveal a strong cognitive avoidance process intended to narrow the environment and minimize psychological discomfort. This is evidenced by an elevated number of Dd responses and syntactically undeveloped, simplistic percepts.

From the perspective of resilience theory, these profiles are concerning. If resilience relies on robust intellectual and cognitive competencies as predictors of recovery (Masten, 2014), these subjects face significant hurdles. Their rigidity prevents the "work of the trauma"; as Brillon (2004) suggests, without cognitive flexibility and effective emotional regulation, an individual cannot accommodate new information into their life narrative or achieve post-traumatic growth. Their low Experience Actual (EA) further suggests that their internal

psychological resources are currently exhausted, leaving little room for the "reconstructive effort" described by Bonanno (2004).

4.4 Clinical Implications and Recommendations

The findings suggest that for first responders with chronic PTSD, traditional "exposure" therapies may be insufficient if underlying cognitive deficits are not addressed. Psychotherapeutic approaches should prioritize:

- Enhancing Cognitive Flexibility: Utilizing cognitive remediation to transition the patient from a "sub-incorporative" (hasty) to an "incorporative" (thorough) scanning style.
- Bolstering Adaptive Resources (EA): Interventions should aim to increase the subject's Experience Actual by strengthening emotional regulation skills and problem-solving abilities.
- Facilitating Integration: Therapists must gently challenge the "high Lambda" avoidance style, encouraging the transition from fragmented sensory re-experiencing toward a structured autobiographical narrative.

In conclusion, this research highlights that cognitive rigidity and avoidant processing styles act as the primary inhibitors of resilience in these first responders. Fostering a psychological recovery requires moving beyond symptom management toward the restoration of the cognitive tools necessary to process and ultimately integrate the traumatic experience.

Conclusion

This study, utilizing Rorschach assessment alongside clinical observations, highlights the profound impact of intentional violence on psychological functioning, particularly concerning cognitive processing and resilience. The findings consistently demonstrate that both subjects developed a significant intrusion syndrome, characterized by the involuntary and distressing re-experiencing of traumatic content. This pervasive re-experiencing, marked by identical emotions and overwhelming stress, profoundly disrupts conscious awareness and leads to chronic psychological disjunction.

A critical insight from this research is the identification of a shared, maladaptive cognitive processing style in both individuals. Characterized by a sub-incorporative scanning of stimuli (as indicated by low Zd scores), this approach hinders the accurate assimilation of complex traumatic information.

This cognitive rigidity prevents the effective integration of the traumatic experience, a process crucial for healing as posited by Horowitz's (1986) theory. The persistent, "raw" presence of traumatic data in the unconscious, coupled with an inability to flexibly accommodate it, perpetuates intrusive imagery and severely compromises adaptive coping.

Consequently, the observed cognitive deficits directly undermine the resilience process in both subjects. Their limited cognitive resources, inflexible processing habits, and compromised control mechanisms - evidenced by Rorschach indicators such as low Blends ratios and reduced Experience Actual (EA) scores - impede their capacity for the "reconstructive effort" central to Bonanno's (2004) and Masten's (2014) models. Specifically, the lack of cognitive flexibility (Brillon, 2004) prevents the subjects from assigning new meaning to their experiences, leaving them in a state of chronic vulnerability.

Ultimately, this research underscores that impaired cognitive processing, particularly an avoidant and rigid approach to traumatic information, creates a vulnerable psychological landscape that hinders an individual's ability to recover. These findings reinforce the necessity of addressing fundamental cognitive processing deficits in therapeutic interventions. Enhancing scanning efficiency and emotional regulation is not merely a symptomatic treatment but a foundational requirement for fostering long-term resilience in first responders.

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