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DEPRESSION IN WOMEN VICTIMS OF VIOLENCE – NEUROPSYCHOLOGICAL PERSPECTIVES

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Abstract

Violence against women represents a pervasive global issue with significant psychological and neurobiological repercussions. A substantial proportion of women exposed to domestic or gender-based violence—whether physical, verbal, sexual, or economic—develop mental health disorders, with depression being one of the most common. This article examines the neuropsychological dimensions of depression in women victims of violence, emphasizing structural and functional brain changes identified through recent research. Alterations in the prefrontal cortex, cingulate cortex, and hippocampus are particularly relevant, affecting attention, autobiographical memory, and emotional regulation. The fragmentation of memory caused by traumatic experiences, coupled with cognitive distortions and reduced coping capacities, contributes to the onset and persistence of depressive symptoms and PTSD. In addition to mapping the affected brain areas, this study highlights the psychological consequences of victimization, including suicidal ideation, low self-esteem, social withdrawal, and difficulties in emotional adaptation. Based on this understanding, the article argues for the development of targeted psychological intervention strategies, incorporating elements of cognitive-behavioral therapy (CBT), trauma-informed care, and mind–body approaches. These interventions can enhance cognitive flexibility, reduce emotional distress, and promote social reintegration. Neuropsychologically informed support has wide applicability in medical, therapeutic, social, and educational contexts, providing critical tools for improving the mental health and quality of life of women victims of violence.

Keywords:*caffeine,schizophrenia, epilepsy, positive and negative affect*

1. INTRODUCTION

Multiple studies show that nearly half of the women who have been exposed to various forms of domestic or gender-based violence (physical, verbal, sexual, economic, etc.) develop different mental disorders (Table 1): anxiety, depression, post-traumatic stress symptoms, feelings of helplessness and worthlessness,

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psychomotor agitation, high levels of distress, and a lack of initiative to adopt help-seeking behaviors (Chandan et al., 2020; Dutton et al., 2006; Lövestad et al., 2017; Torres García, Vega-Hernández, et al., 2021; Zhang et al., 2024).

Violence against women thus creates a traumatic framework within which various mental disorders may develop. Moreover, if violence against women is widespread, its normalization by society hinders access to clinical services. This generates the need to study in more detail the conditions in which these disorders arise in female victims of violence, so that coherent, tailored, and effective psychological intervention programs can later be developed.

Various studies on violence victims (IPV, gender-based violence) have shown that, in general, they develop moderate or severe symptoms of depression, anxiety, or PTSD. These symptoms, in turn, generate attentional and memory deficits, impairment of autobiographical memory, executive and planning function disturbances, and slower information processing speed, as well as cognitive sequelae resulting from direct cranial trauma (Table 1) (Billoux et al., 2016; Daugherty et al., 2019; Dotson et al., 2020; Koroglu & Durat, 2025; Kwako et al., 2011; Torres García, Vega-Hernández, et al., 2021).

It has also been observed that individuals diagnosed with depression show significant alterations in dorsal cortico-limbic networks, particularly in the prefrontal cortex and cingulate cortex (Table 1), which mediate attention, information processing, and autobiographical memory (Hameed et al., 2020).

Previous fMRI meta-analyses have already demonstrated that hippocampal volume reduction and dysfunction are central to the onset of depression (with an 8% decrease in the left hippocampus and 10% in the right, and a significant association between depressive episodes and the right hippocampus) (Rosso, 2005), as well as PTSD (Smith, 2005).

Another study found that women diagnosed with major depression showed significant hippocampal volume reduction associated with childhood trauma, suggesting that prior brain changes may serve as vulnerability factors for the onset of depression or PTSD, rather than consequences of the disorders themselves (Lupien et al., 2009).

Given the high prevalence of depressive disorders among women victims of violence (Daugherty et al., 2019)—which may also involve serious outcomes such as suicidal behavior—this article focuses on the emergence of depression in this population and its consequences.

Violence-induced trauma has the capacity to create “disconnections” or “splits” in the victim’s memory between pre- and post-traumatic episodes, impairing their ability to clearly understand and integrate their experiences. These disjunctions generate a state of confusion and lay the groundwork for the development of depressive and PTSD symptoms (Bedard-Gilligan & Zoellner, 2012; Riedsser & Fischer, 2007).

From a psychiatric perspective, the DSM-5-TR (American Psychiatric Association, 2022) defines depressive disorders—including mood disorders, major depressive disorder, persistent depressive disorder, premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder

due to another medical condition, and other specified and unspecified depressive disorders—as being characterized by sadness, emptiness, or irritability, accompanied by somatic and cognitive changes that significantly affect the individual's functioning.

Vasile A. I., as cited in Trifu et al. (2021), summarizes the general symptomatology of depression as follows: "insomnia/hypersomnia; loss of interest in previously enjoyed activities; feelings of guilt or worthlessness; low energy or fatigue; poor concentration; increased or decreased appetite; psychomotor agitation or retardation; suicidal ideation, plans, intentions, or attempts, past or present."

From an etiological standpoint, Kielholz (as cited in Tudose et al., 2011) classifies depression based on origin into: somatogenic (symptomatic or organic depression), endogenous (schizoaffective, bipolar/unipolar, or involutional depression), and psychogenic (neurotic, exhaustion, or reactive depression).

The cognitive perspective (Leahy et al., 2022) defines a major depressive episode by the presence of at least five out of nine symptoms for a minimum duration of two weeks, including depressed mood, suicidal ideation, anhedonia, guilt or worthlessness, sleep disturbances, weight change, psychomotor changes, fatigue, concentration difficulties, and/or indecisiveness. Behavioral theories describe depression as a result of loss or absence of reinforcement, or the inability to obtain rewards.

Furthermore, these theories identify clear behavioral predictors of depression, including stressful life events and their consequences, loss of rewarding behaviors, interpersonal dysfunctions, poor assertiveness, and social withdrawal.

Various cognitive-behavioral theories posit that cognitive processes—especially negative thinking supported by dysfunctional beliefs—play a central role in the development and persistence of depression. Additional research highlights that persistent worry and rumination are also key features of depression, originating from the idea that both conscious and unconscious cognitions act as stimuli generating emotional, physiological, and behavioral response patterns (Chen, 2024; David, 2012).

On a psychological level, the experience of victimization is proven to negatively impact a woman's emotional stability. Victims may develop suicidal ideation, multiple somatizations, low self-esteem, generalized disability, and behavioral issues. Even when a woman becomes accustomed to the abusive situation, this adaptation does not shield her from psychological consequences, particularly when her self-esteem is compromised, coping strategies are dysfunctional, and psychological discomfort persists in interactions with the abuser (Torres García, Pérez-Fernández, et al., 2021).

Finally, social interaction is also compromised, as the abuser's efforts to isolate the victim generate deficits in social skills, assertiveness, initiative, and decision-making. The resulting insecurity fosters submission, compliance, and negative self-perceptions, often accompanied by intense guilt (Torres García, Pérez-Fernández, et al., 2021).

2. OBJECTIVES AND HYPOTHESSES

a. OBJECTIVES

To identify brain areas involved in the development and maintenance of depression in women victims of violence, and to explore whether specific neuropsychological profiles can guide psychological interventions.

b. HYPOTHESSES

If specific brain regions involved in depression due to violence-related trauma are identified, this knowledge may help design effective psychological interventions aimed at reducing depressive symptoms.

3. METHOD

3.1. PARTICIPANTS

Seventeen studies were analyzed, including meta-analyses and empirical research on the relationship between trauma, cognitive impairment, and depression in women victims of violence. Findings emphasize hippocampal volume changes, autobiographical memory impairment, and attentional dysfunction.

3.2. RESEARCH DESIGN

The study consists of six case reports, compiled from data gathered through the administration of the PANAS-GEN, the Lazarus Clinical Interview, and psychological observation.

For the research design, the following variables were analyzed:

1. Dependent variables: positive and negative affective states
2. Independent variables: coffee consumption

The case reports will be presented as follows, under the codings of E1, E2, E3 (Epilepsy PatientS Case Reports) and S1, S2, S3 (Schizophrenia Patients Case Reports)

4. PRESENTETION OF CASE REPORTS

A series of key elements from all these studies helped construct a "composite profile" of the brain regions involved in the onset of depression in victims of violence. On a cognitive level, these findings guide us toward identifying the types of cognitive, memory-related, and attentional processes that are affected. With this knowledge, we can develop psychological intervention programs specifically targeting these patterns, so that changes in behavior, attitudes, and perspectives may, through neuroplasticity, lead to

the restoration and regulation of the neural networks previously affected by dysfunction.

Table 1 Summary of the Impact of Violence on Neuropsychological, Emotional, and Brain Areas

Impact of Violence		
Neuropsychological Impairments	**Emotional Impairments**	**Involved Brain Areas**
Autobiographical memory dysfunction	Confusion, cognitive inflexibility	Hippocampus, prefrontal cortex
Attention deficits	Irritability, hypervigilance	Dorsal cortico-limbic networks
Executive dysfunction (planning, decision-making)	Emotional instability, impulsivity	Prefrontal cortex, anterior cingulate cortex
Information processing deficits	Anxiety, stress	Prefrontal cortex, amygdala
Working memory impairment	Feelings of helplessness	Hippocampus, dorsolateral prefrontal cortex
Delayed recall	Emotional withdrawal	Hippocampus, medial temporal lobe
Verbal memory impairment	Low self-esteem	Temporal lobe, limbic structures
Concentration difficulties	Guilt, depressive thoughts	Cingulate cortex, prefrontal cortex
Dissociation, memory fragmentation	Identity confusion, avoidance behaviors	Hippocampus, orbitofrontal cortex

*Note: Autobiographical memory is affected by the fractures/splits caused by violence-related events and must be specifically addressed in psychological intervention, as these splits contribute to cognitive inflexibility, making beliefs and thought patterns resistant to change; for this reason, it is listed separately.

The results obtained from the analysis of reviewed studies and the six clinical case reports reveal a complex and interdependent picture of how violence affects the psychological and neurocognitive structures of women victims. From a neuropsychological perspective, a specific pattern of cognitive impairments was identified, characterized by difficulties in concentration, memory disturbances (particularly autobiographical and working memory), slowed information processing, reduced planning and decision-making abilities, and the emergence of dissociative phenomena. These manifestations are correlated with structural and

functional changes in key brain areas such as the hippocampus, prefrontal cortex, cingulate cortex, and amygdala.

One of the most relevant findings is the impairment of autobiographical memory, which is essential for the construction of personal identity and self-reconstruction following trauma. In women who have experienced violence, this memory is often fragmented, unclear, or dissociated, leading to major difficulties in building a coherent life narrative. This disruption is frequently accompanied by increased cognitive rigidity, which makes it harder to restructure negative thinking and adapt to new perspectives.

On the emotional level, there is a high prevalence of depressive and anxiety symptoms, often accompanied by intense feelings of guilt, shame, worthlessness, and low self-esteem. Psychological suffering manifests through social withdrawal and a significant decrease in help-seeking behaviors, further reinforcing the victim's isolation and sense of helplessness.

These results support the hypothesis that cognitive and emotional dysfunctions are not merely consequences of trauma but also act as maintaining and aggravating factors for psychological distress when intervention is lacking. In this context, the brain's capacity for adaptation and reorganization—through neuroplasticity—becomes essential in therapeutic approaches. Reviewed studies confirm that well-targeted psychological interventions, such as cognitive-behavioral therapy (CBT), mindfulness-based therapies, or "mind-body" approaches, can help reduce symptoms by activating alternative brain circuits and restoring cognitive and emotional flexibility.

Another significant aspect observed is the impact of trauma on a woman's ability to relate to others. Violence has a direct effect on social skills and emotional expression, often resulting in reduced social interaction and increased compliance and submission to the abuser. Furthermore, the social isolation imposed by the aggressor limits the victim's access to emotional support, increasing the risk of developing severe affective disorders.

Consequently, the results demonstrate the urgent need for psychological intervention programs that not only aim to reduce clinical symptoms but also focus on personal identity rehabilitation, restoration of autobiographical memory, social reconnection, and strengthening of cognitive and emotional capacities. Only through an integrated, neuropsychologically-informed, and personalized approach can true psychological healing and reintegration be achieved for women victims of violence.

4. CONCLUSIONS & DISCUSSION

The current analysis emphasizes the profound psychological and neurocognitive consequences of violence on women, especially the onset and persistence of depressive symptoms. The research supports the idea that prolonged exposure to trauma leads to measurable and significant changes in brain functioning, particularly in regions responsible for autobiographical memory, emotional regulation, executive functioning, and decision-making. These findings

contribute to a more nuanced understanding of the cognitive-emotional patterns seen in women who have experienced intimate partner or gender-based violence.

One of the central conclusions is that depression in these women is not simply a psychological reaction to external abuse but a condition deeply embedded in neurobiological mechanisms. The observed impairments in autobiographical memory, attentional control, and information processing are tied to dysfunctions in the hippocampus, prefrontal cortex, and cingulate cortex, among others. These neural disruptions impact a woman's ability to make sense of her experiences, seek help, and reestablish social connections—all of which are vital for psychological recovery.

As such, interventions that aim to support women in this context must be informed by neuropsychological insights. Psychological therapies that integrate trauma-focused techniques, cognitive restructuring, emotional regulation training, and social reintegration components have the potential to reestablish damaged networks through the brain's plasticity. Interventions should also emphasize the reconstruction of autobiographical memory, as its impairment plays a critical role in identity disintegration and cognitive rigidity. Furthermore, increasing access to mental health services and psychoeducation programs for this population is vital, especially in social contexts where violence against women is normalized or minimized.

Despite the strength of these findings, several limitations must be acknowledged. Firstly, the conclusions are drawn from a limited number of clinical cases and existing literature, which may not fully capture the diversity of experiences among all women victims of violence. The sample size and qualitative nature of the data limit generalizability. Secondly, many studies in the literature rely on self-reported symptoms or retrospective accounts, which may be influenced by recall bias or emotional suppression. In addition, most neuroimaging data are correlational, meaning that while structural and functional brain alterations are observable, establishing clear causality remains challenging.

Moreover, cultural, socio-economic, and individual variability among women are not fully addressed in the reviewed data. Factors such as access to healthcare, education, financial independence, and the presence of support networks can significantly alter both the impact of violence and the effectiveness of psychological interventions. These variables should be more systematically integrated into future research to provide a more comprehensive and equitable framework for support.

In conclusion, this research highlights the importance of neuropsychologically informed interventions tailored to the unique profiles of women who have suffered from violence. While promising, these conclusions should serve as a foundation for more extensive empirical studies that further explore the relationship between trauma, brain functioning, and recovery. Bridging neuroscience with clinical practice offers a path forward in developing therapeutic strategies that are not only effective but also respectful of the deep psychological wounds caused by interpersonal violence.

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