The Effects of PTSD on Executive Function: A Counselling Perspective

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The purpose of this paper will be to address the question, “What do counsellors need to know about executive functions to support clients?” I will examine this query specifically focusing on clients with post-traumatic stress disorder (PTSD). In order to explore this topic, I will first introduce the terms executive function (E.F.) and PTSD, and discuss their relevancy to counselling through examples of cognitive-impairment and behavior regulation. I will then present some strategies counsellors can use to support their clients experiencing E.F. deficits resulting from PTSD.

Executive function can be defined as “the high level cognitive processes that facilitate new ways of behaving, and optimize one’s approach to unfamiliar circumstances” (Gilbert & Burgess, 2008, p.R110). Overall, these tasks allow us to live independent and purposeful lives (Gilbert & Burgess, 2008). Examples include the ability to sustain attention, effectively use working memory, and have successful social interactions (Lewis & Carpendale, 2009).

PTSD on the other hand, is a “psychological disorder resulting from exposure to a traumatic event, where the person also evidences re-experiencing, avoidance, and hyperarousal symptoms related to the trauma” (Walter et al., 2010, p.292). The individual’s memory of the traumatic event “is thought to be fragmented, with storage in sensory fragments and retrieval occurring as sensory and emotional representations” (Polak et al., 2012, p.12). Examples of those who may suffer from PTSD include war veterans and survivors of sexual violence (Herman, 1997).

Studies have shown that some individuals with PTSD have deficits in executive functioning

(Aupperle, 2012; Polak, 2012; Walter et al., 2010). These deficits include difficulty with decision-making and sustaining attention, regulation of impulsive behavior, and issues with mood stability (Walter et al. 2010). These deficits are problematic because they can greatly impact a person’s life. Examples of this include dealing with daily tasks, such as concentrating on a task, decision-making, sustaining relationships, and it can also affect one’s ability to benefit from treatment such as counselling (Polak et al., 2012). It is therefore important that counsellors be aware of clients with deficits to the executive function, both on a cognitive as well as a behavioral level.

Cognitive impairments in the executive function due to PTSD include working memory, attentional flexibility, inhibitory control and planning (Lewis & Carpendale, 2009). These types of tasks can impede on an individual’s functioning, for example the ability to sustain attention and concentrate in school. Furthermore, some individuals with PTSD may have an attentional bias toward perceived threat (Aupperle et al., 2012), or be prone to states of hyperarousal (Herman, 1997), which would create further difficulties with concentration. In order to better understand their clients, it would be important for educators and school counsellors working with the student to be aware of the connection between PTSD and E.F. Understanding this relationship would help the counsellor to know that the student is not merely acting out, or uninterested in their school work, but rather dealing with cognitive deficits as a result of experiencing a traumatic event. This knowledge may help counsellors to support the student through alternative means, to be discussed later in this paper.

Behavioral components affecting E.F. due to PTSD include impulsive behavior and difficulty with successful social interactions (Lewis & Carpendale, 2009; Walter et al., 2010). These behaviors hinder the individual’s ability to create and maintain relationships with others. As supportive relationships can be crucial for an individual with PTSD’s healing process (Herman, 1997), it is important for the counsellor to be aware that a person with executive function deficits may have more trouble than the average person in creating healthy, supportive relationships.

It would be helpful for the counsellor to work on these deficits with the client so he or she can be in a better position to form strong social ties.

One way that counsellors can help clients with E.F. deficits is to support their ability to cope with their PTSD symptoms. In a study on coping capabilities in maltreated children, it was found that self-esteem and self-reliance were important for coping (Cicchetti & Rogosch, 2009). Counsellors could support clients to build their self-esteem, and well as their self-reliance using cognitive-based therapies such as cognitive-behavioral therapy (James et al., 2008). Other studies have found that methods such as attentional training have been effective in reducing anxiety in subjects (Aupperle et al., 2012). Attention modification interventions encourage clients to move their attention away from threatening, anxiety producing stimuli, towards neutral stimuli (Rozenman et al., 2011). James et al. (2008) suggest that counsellors need to be more aware of cognitive difficulties associated with affective disorders, and therefore should tailor their approach to these clients accordingly. The authors of this study suggest such strategies as reducing the complexity of material used in therapy, ensuring the agenda is meaningful for the client, and preventing overloading of the client’s working memory. These approaches aim to address the deficits of E.F. the client is experiencing, and thus allow greater benefit from therapy.

In conclusion, I have presented the impact of PTSD on executive functioning, outlined the cognitive and behavioral components associated, and presented some treatment strategies counsellors can use to better support their clients with PTSD. I believe it is crucial that the therapist be knowledgeable about and sensitive to the effects of PTSD on executive functioning to better support their clients. This knowledge (avoiding overloading the client’s executive functions), and sensitivity (avoidance of labelling a student a “trouble-maker” when they are having valid difficulties with executive functioning), can lead to a more supportive and effective client-counsellor relationship.

References

Aupperle, R. L., Melrose, A. J., Stein, M. B., & Paulus, M. P. (2012). Executive function and PTSD: Disengaging from trauma. *Neuropharmacology, 62*(2), 686-694. doi: 10.1016/j.neuropharm.2011.02.008

Cicchetti, D., & Rogosch, F. A. (2009). Adaptive coping under conditions of extreme stress: Multilevel influences on the determinants of resilience in maltreated children. In E. A. Skinner & M. J. Zimmer-Gembeck (Eds.), Coping and the development of regulation. *New Directions for Child and Adolescent Development, 124*, 47–59. San Francisco: Jossey-Bass.

Gilbert, S. J., & Burgess, P. W. (2008). Executive function. *Current Biology, 18*(3), R110-R114. doi: 10.1016/j.cub.2007.12.014.

Herman, J. (1997). *Trauma and recovery: The aftermath of violence- from domestic abuse to political terror.* New York: Basic Books.

James, I. A., Reichelt, F. K., Carlsonn, P., & McAnaney, A. (2008). Cognitive behavior therapy and executive functioning in depression. *Journal of Cognitive Psychotherapy, 22*(3), 210-218. doi: 10.1891/0889-8391.22.3.210

Lewis, C., & Carpendale, J. I. M. (2009). Introduction: Links between social interaction and

executive function. In C. Lewis & J. I. M. Carpendale (Eds.), Social interaction and the

development of executive function. *New Directions in Child and Adolescent Development, 123*, 1–15.

Polak, A.R., Witteveen, A.B., Reitsma, J.B. and Olff, M. (2012). The role of executive function in posttraumatic stress disorder: A systematic review. *Journal of Affective Disorders, 141,* 11-21. doi:10.1016/j.jad.2012.01.001

Rozenman, M., Weersing, V. R., & Amir, N. (2011). A case series of attention modification in clinically anxious youths. *Behaviour Research and Therapy, 49*(5), 324-330. doi: 10.1016/j.brat.2011.02.007

Walter, K.H, Palmieri, P.A., and Gunstad, J.(2010). More than symptom reduction: Changes in executive function over the course of PTSD treatment. *Journal of Traumatic Stress, 23*(2), 292-295. doi: 10.1002/jts.