Beyond Shadows: Social Anxiety, Body Awareness, Trauma, and Alexithymia in a Journey of Healing with Dialectical Behavioural Therapy

by

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Abstract

The present project aimed to examine the relationship of a series of cognitive and emotional factors such as social anxiety, body awareness, trauma type, and alexithymia, and unravelling their complex interplay in shaping and intensifying Social Anxiety Disorder (SAD). SAD has a lifetime prevalence rate of 7.1% and is a common disorder affecting nearly 15 million adults in the United States. The research underscores a heightened susceptibility to SAD, disturbed body awareness, and alexithymia among individuals who have faced interpersonal trauma. The concept of "the body keeps the score" emphasizes the storage of trauma in the body, disrupting the harmonious connection between mind and body. In this project, DBT is presented as a practical and effective holistic tool not only to improve well-being but also to heal the underlying causes and comprehensively navigate the multifaceted challenges of SAD by incorporating interventions including mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness.

Keywords: social anxiety; body awareness; alexithymia; trauma; interpersonal trauma; non-interpersonal trauma; dialectical behavioural therapy.

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Chapter 1: Introduction

> I have learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.
>
> - Maya Angelou

Social anxiety disorder (SAD) is a psychological condition characterized by a persistent and recurring fear of being humiliated or judged by others (American Psychiatric Association, 2022; Leigh & Clark, 2018). This intense fear leads people to experience self-consciousness, nervousness, dread, and uncertainty when encountering social situations (National Collaborating Centre for Mental Health, 2013). SAD is a common disorder: the lifetime prevalence rate for SAD is 7.1% among the general population (Stein et al., 2017). In the United States, SAD is the third most prevalent mental health condition, following depression and substance abuse (Kessler et al., 2005). SAD has been reported to affect 14.2% of females and 11.8% of males during their lifetimes (Kessler et al., 2005), which means almost 15 million adults have been affected by SAD. Although it is common for a person to occasionally experience anxiety during social settings, some people experience social anxiety more frequently than others, which may be due to individual differences in bodily awareness and how they regulate emotion (Daros et al., 2019; Goldin et al., 2014; Kaplan et al., 2015; Matuz-Budai et al., 2022). Moreover, the association between social anxiety, body awareness, and alexithymia may occur because individuals with high social anxiety are often unable to avoid traumatic, anxiety-evoking situations (National Collaborating Centre for Mental Health, 2013). Anxiety Buffer Disruption Theory (ABDT) suggests that hyperarousal, avoidance, and dissociation occur when a traumatic event affects a person's ability to manage anxiety (Pyszczynski & Kesebir, 2010). Under normal circumstances, a person's autonomic nervous system will adaptively and reflexively respond (fight-flight-or-

freeze) to perceived threats (Sherin & Nemeroff, 2011). However, with recurring trauma, the parasympathetic nervous system (which is responsible for counteracting the sympathetic nervous system) can become overloaded, which upsets the homeostatic balance of the body (Perry & Pollard, 1998). As a result, this chronic disruption keeps the nervous system in survival mode. The short-term protections become permanent impairment as the body undergoes sympathetic (fight or flight) nervous system dominance (Sherin & Nemeroff, 2011). Repeated traumatic experiences also alter neurobiological functioning by impairing the hypothalamic-pituitary-adrenal (HPA) axis (Herman et al., 2016), which is a critical network that regulates a person's behavioural response to stress (Kuhlman et al., 2015). Impairment in the HPA axis leads to the persistence of fear-related patterns that impact cognitive and social functioning, physical sensations, emotions, and behaviours (van Bodegom et al., 2017). When traumatic events threaten an individual's core assumptions, ABDT suggests that there is dysregulation of an anxiety buffer mechanism (Trifiletti et al., 2017). It has also been proposed that repeated traumatic events encourage individuals to believe that nothing (including their anxiety buffer) can keep them safe from the danger (Pyszczynski & Kesebir, 2010). These dysfunctional mechanisms make people vulnerable and unprotected in the face of overwhelming anxiety, which provokes clusters of hyperarousal and avoidance (Pyszczynski & Kesebir, 2011).

Purpose Statement

This capstone project serves the overarching goal of offering readers, with a primary focus on mental health practitioners, a comprehensive understanding of the intricate interplay among social anxiety, body awareness, trauma, and alexithymia. It simultaneously underscores the potential of integrating Dialectical Behavioural Therapy (DBT) as a promising therapeutic

approach for individuals dealing with these complex factors. More specifically, the purposes encompass the following:

- Provide an extensive understanding of social anxiety and the multifaceted associations among social anxiety, body awareness, trauma, and alexithymia.
- Provide an extensive understanding of how these interconnected elements collectively shape the landscape of social anxiety, fostering a holistic understanding.
- Beyond contributing to theoretical insights, this project aspires to have practical implications by guiding mental health practitioners and researchers in comprehending and addressing the intricate dynamics underlying social anxiety.
- Provide practical implications for mental health practitioners by providing support on how to comprehend and effectively address the intricate dynamics that underlie social anxiety.
- Emphasize the potential of Dialectical Behavioural Therapy (DBT) as a valuable therapeutic approach, highlighting its practical application designed to not only improve the well-being of individuals experiencing social anxiety but also address and heal its underlying causes. It aims to promote adaptive coping mechanisms in learning and using DBT to help individuals navigate the complexities of social anxiety and enhance their overall well-being.

Contribution to the Field

The primary objective of this research review is to contribute significantly to the field of mental health by providing insightful perspectives on several significant aspects of SAD. The fundamental aim of this study is to enhance comprehension of the intricate relationships between psychological and physiological elements that contribute to the complex association between

bodily awareness, social anxiety, trauma, and alexithymia, consequently intensifying social anxiety. This knowledge has the potential to be a valuable resource for mental health professionals. It is because it might assist them to delve deeper into the root causes of social anxiety in their clients and to use tailored treatment approaches that directly target these underlying factors. Moreover, this project has the potential to assist those who have encountered trauma and are facing mental health challenges, including impaired bodily awareness, alexithymia, and social anxiety, in understanding and navigating through their experiences.

Furthermore, this review fosters the implementation of a holistic perspective that merges both psychological and physiological elements. This highlights the crucial significance of taking into account the complicated and nuanced relationship between the mind and body when conducting assessments of mental health, implementing interventions, and conceptualizing treatment strategies. Ultimately, this project fosters a more whole and comprehensive approach to mental health care.

In addition, this research review aspires to play a role in reducing the stigma associated with mental health concerns. By fostering increased advocacy, awareness, and knowledge in this domain, it seeks to illuminate these matters and encourage open conversations surrounding mental health. Ultimately, the central goal of this research review is to contribute to the improvement of diagnosis, treatment, and preventive measures, thereby enhancing the overall well-being of individuals facing dysfunctional bodily awareness, social anxiety, trauma, alexithymia, and related disorders.

Reflectivity and Positionality Statement

Starting this capstone project is the culmination of my academic pursuits, practicum experiences, and profound personal experiences. Through my academic coursework and practical

experiences during my practicum, I have developed a deep understanding and interest in exploring the intricate relationship between bodily awareness, social anxiety, trauma, and alexithymia. This has allowed me to gain a profound appreciation for the multifaceted nature of the mind-body connection, emotions, and the remarkable resilience showed by individuals facing mental health difficulties. The formation of my positionality is fundamentally influenced by the significant impact of my practicum experiences, which have exposed me to a multitude of narratives and challenges faced by clients. Having observed the tremendous effects of therapy and the significant influence of trauma on individuals' lives, I have developed a deep sense of compassion and a strong commitment to making a meaningful contribution to the area of mental health. Through my past personal experiences and the advantage of being exposed to clients' accounts, I have developed a heightened awareness of the significant impact that trauma has on the interconnectedness of the body and mind, as well as the intricate and often unspoken struggles associated with social anxiety. I have developed an appreciation for the significance of cultural sensitivity and the sociocultural framework in which people's experiences unfold. My positionality has transformed my academic progress, as I have encountered a range of theoretical knowledge and research that have expanded my understanding of the subject matter.

One approach adopted for this capstone project is rooted in the conceptual paradigm, which emphasizes the subjective nature of human experiences and the significant influence of contextual variables. I approach this study with an open heart, receptive attitude, and a reflective perspective, recognizing that my own experiences, predispositions, and previous interactions with my clients might impact my analysis and understanding of literatures. I am dedicated to upholding honesty by openly admitting my background and perspectives. Through this capstone

project, I hope to bridge the gap between academic knowledge and real-world applicability, drawing from both my academic foundation and the invaluable lessons I have learned during my practicum. I believe that this capstone project will enhance mental health providers' understanding and enable them to make a constructive impact on individuals challenged with mental health difficulties.

Definition of Terms

Alexithymia: The prevailing perspective among researchers has been to conceptualize alexithymia as a multidimensional trait comprising four interconnected components: the challenge in recognizing one's own emotions, the struggle to articulate one's emotional experiences, a cognitive orientation that leans toward external stimuli rather than internal experiences, and a limited capacity for imaginative thinking, often manifested by a lack of daydreams (Krystal, 1982; Preece et al., 2020; Sifneos, 1996; Taylor & Bagby, 2004).

Amygdala: The amygdala is a structurally almond-shaped entity situated within the temporal lobe. The amygdala, an integral component of the limbic system, plays a vital role in the regulation of emotions, behaviours, and the formation of memories (AbuHasan et al., 2023; Rajmohan & Mohandas, 2007).

Bodily Awareness: This refers to the level of attentiveness individuals have towards their internal body processes, their sense of self, and how their bodies respond to emotions and external stimuli (Price & Thompson, 2007).

Dialectical Behavioural Therapy (DBT): Linehan (1994) proposes a complete cognitive behavioural therapy approach for mental health conditions that are complicated and challenging to treat. The term "dialectical" refers to the process of synthesizing or integrating opposing

elements. The core dialectical tension in DBT revolves around the seeming paradox between acceptance and change as therapeutic tactics (Heard & Linehan, 1994).

Hippocampus: The hippocampus is a neural structure located inside the depths of the temporal lobe of each cerebral cortex. It is a part of the limbic system that plays a crucial role in regulating many cognitive processes such as motivation, emotion, learning, and memory (Anand & Dhikav, 2012).

HPA Axis: The hypothalamic-pituitary-adrenal axis (HPA) serves as the primary physiological mechanism for responding to stress. It is the neuroendocrine connection between the perception of stress and the subsequent physiological responses to stress (Dunlavey, 2018)

Hyperarousal: Hyperarousal, alternatively referred to as the "fight or flight response", is an intensified condition of activity or energy. The phenomenon occurs when a client's nervous system abruptly enters a state of heightened vigilance, even in the absence of an imminent threat (Bottari et al., 2021). When individuals enter a hyperarousal zone, they may experience a lack of agency or perceived control over their behaviours. Perceived danger and painful experiences are frequently identified as potential triggers. Symptoms often linked with hyperarousal include a rapid heartbeat, a constant sense of hypervigilance with heightened sensitivity to potential threats, irritability, difficulty concentrating, and an exaggerated startle response to sudden stimuli. Anxiety and restlessness are prevalent, as is the challenge of falling or staying asleep due to racing thoughts, leading to insomnia (van der Kolk, 2006).

Hypoarousal: Hypoarousal, referred to as the "shutdown" or "collapse" reaction, is a psychological condition that can be activated by many stimuli, such as perceived threats, the retrieval of painful memories, or the manifestation of emotions associated with previous traumatic events (Beutler et al., 2022). Symptoms often linked with hypoarousal include a

prevailing sensation of sadness, emotional numbness, a pervasive feeling of emptiness, a condition of body limpness or flaccidity, a vacant or blank gaze, challenges in verbal communication, and episodes of dissociation (Gostisha et al., 2014). Hypoarousal, resulting from excessive stimulation of the parasympathetic nervous system, can significantly impact a client's sleep patterns and eating habits, frequently leading to emotional numbness, social disengagement, and challenges in successfully articulating their feelings and thoughts (Kwon et al., 2021).

Interpersonal Trauma: Interpersonal trauma (IPT) refers to a recurring, persistent, and complex social event that is willfully perpetrated by an individual. Examples of IPT include social threats, emotional abuse, physical or sexual assault, molestation, and domestic violence (Anand & Dhikav, 2012).

Limbic System: The limbic system plays a crucial role in maintaining appropriate physiological and psychological functioning. This system serves as the central hub for the regulation of emotions, behaviour, and memory. Additionally, it has a role in regulating responses to stress, attentional processes, and sexual drive (Rajmohan & Mohandas, 2007).

Parasympathetic Nervous System (PNS): The PNS is an essential component of the autonomic nervous system, serving a critical function in the regulation of bodily homeostasis and facilitating a state of relaxation and healing. Commonly designated as the "rest and digest" system, it functions in opposition to the SNS (Wulf & Tom, 2023).

Social Anxiety: Social anxiety disorder (SAD) refers to an exaggerated apprehension experienced by individuals in one or more social situations, wherein they are concerned about being evaluated by others (American Psychiatric Association, 2022).

Sympathetic Nervous System (SNS): The SNS plays a crucial role within the autonomic nervous system, serving the unique function of initiating the body's immediate "fight or flight" reaction when confronted with stress or perceived dangers. The activation of the body induces a state of readiness for rapid action, characterized by heightened awareness, increased energy levels, and physical readiness of the individual (Chu et al., 2023).

Trauma: Traumatic experiences, characterized as events and memories that pose a threat to life or cause emotional and bodily injury, frequently have adverse effects on several dimensions of psychophysiological functioning (Center for Substance Abuse, 1999; van der Kolk, 2000).

Window of Tolerance: The notion of the window of tolerance serves as a framework for understanding the extent to which individuals can endure and manage severe emotional experiences. When individuals are in a state of presence, calmness, groundedness, and engagement, they are inside their window of tolerance (Corrigan et al., 2011).

Summary

The primary objective of this study is to delve into the intricate links between body awareness, trauma, alexithymia, and social anxiety, offering a comprehensive review that sheds light on the roles of these interconnected factors in the intricate development of social anxiety. In chapter two, the literature review will delve into in-depth exploration, which adopts a holistic perspective on the connection between mind and body, to unravel the psychological and physiological consequences of trauma within the context of the relationship between social anxiety, body awareness, and alexithymia. The literatures investigate how trauma can disrupt one's awareness of their body, potentially resulting in heightened sensitivity potentially leading to detachment from physical sensations and further complicating the experience of social anxiety. It highlights the neurobiological and physiological changes that occur as a consequence

of trauma, adding layers of complexity to the integration of bodily sensations and emotions (Kearney & Lanius, 2022). Ultimately, this serves to strengthen the association between impaired body awareness, alexithymia, and social anxiety.

Furthermore, the literatures delve into the impact of trauma on the cognitive processes that govern emotional regulation and processing, with a particular focus on the phenomenon known as alexithymia (Morie et al., 2020) characterized by difficulties in identifying and articulating emotions as a way to cope with overwhelming emotions (Benau et al., 2020; Panayiotou et al., 2020; Radetzki et al., 2021). The disconnection between the brain and the body, as provoked by the profound effects of trauma on the neural level, can initiate a complex bidirectional relationship between alexithymia and bodily awareness (Majohr et al., 2011; Price & Thompson, 2007; Zorzella et al., 2020). Within this intricate interplay, individuals may experience emotional detachment and a notable impairment in their capacity to perceive bodily sensations. This dysfunctional bodily awareness, when combined with alexithymia, can contribute to social anxiety, as individuals become overly focused on their physical experiences, or conversely detached from their bodily experiences, and have difficulty expressing their emotions (Benau et al., 2020; Panayiotou et al., 2020; Radetzki et al., 2021).

Recognizing the intricate relationships between body awareness, trauma, alexithymia, and social anxiety is of paramount importance within the realms of both research and clinical practice. This comprehension opens doors to interventions and refined therapeutic strategies that can assist individuals in effectively managing social anxiety and enhancing their overall well-being. Moving forward, chapter three will outline a workshop designed for individuals with SAD, taking a holistic route, adopting Dialectical behaviour Therapy (DBT). Drawing from established research and studies, the workshop will focus on teaching techniques and strategies

derived from DBT, which have showed efficacy in managing symptoms of SAD. Furthermore, the workshop will provide further resources educational elements that make this workshop a valuable experience.

Chapter 2: Literature Review

Social Anxiety

Social anxiety is described as experiencing significant fear or anxiety when immersed in a social situation that can lead to embarrassment or the scrutiny of others (American Psychiatric Association, 2022). The social situation can include performing in front of a person or group (e.g., giving a speech), being observed in public, meeting new people, or engaging in conversations with others. The most recent Diagnostic and Statistical Manual for Mental Disorders (DSM-5- TR) criteria for a SAD diagnosis includes four symptom clusters: (1) similar social situations almost always trigger anxiety, (2) the person actively avoids these situations, (3) the anxiety is out of proportion to the actual threat (when considering normal sociocultural factors), and (4) the anxiety, fear, and avoidance causes significant distress and greatly impairs social or occupational functioning (American Psychiatric Association, 2022). It usually starts in childhood or early adolescence and persists until treated (Kessler et al., 2005). Critically, the etiology of SAD includes but is not limited to a complex interplay with past traumatic events, disturbance in mind-body connection, bodily awareness, emotional dysregulation, and genetics (Cook & Newins, 2021; Garfinkel & Critchley, 2013; Spurr & Stopa, 2002; Terasawa et al., 2013).

Social anxiety disorder has several comorbidities, which can further complicate the conceptualization and treatment of the disorder. For instance, 20% of individuals with SAD have co-occurring bipolar disorder (BD) (Pavlova et al., 2015), 14.8% to 46.0% have co-occurring post-traumatic stress disorder (PTSD) (McMillan et al., 2014), and as high as 50% have co-occurring substance use disorders (Bradizza et al., 2006). Unfortunately, treatment-seeking behaviour for patients with SAD is rare or delayed unless it is accompanied by another

psychiatric disorder. Based on a 2007 Anxiety and Depression Association of America survey, 36% of individuals with social anxiety disorder disclosed that they had symptoms for a duration of 10 or more years before seeking assistance (Anxiety and Depression Association of America, 2007). The reason for this might be that, in general, comorbid disorders are associated with increased symptom severity, greater impairment in social and occupational functioning (e.g., missed days at work, dropping out of school, poorer academic performance, having fewer friends and romantic relationships, poorer quality of relationships, and having a higher likelihood of experiencing bullying (Acquah et al., 2016; Hebert et al., 2013; La Greca & Lopez, 1998; Leigh & Clark, 2018); poor outcomes in therapeutic interventions, and higher rates of suicide (Koyuncu et al., 2019).

Social anxiety disorder significantly impacts individuals' quality of life by disturbing their social growth and emotional well-being (Alomari et al., 2022). A study conducted by Hohls et al. in 2021 revealed that individuals with SAD scored much lower on measures of quality of life compared to those without the disorder (Hohls et al., 2021). For example, one interesting aspect of SAD is that individuals with SAD often desire social interactions, but feel overwhelmed by their perceptions about social situations such as a fear of negative judgement, rejection, and embarrassment, leading to an internal dilemma (Kashdan et al., 2013; Leigh & Clark, 2018). The fear of perceived expectations in social situations intensifies their anxiety, making them hyperaroused, hypervigilant, and hyperaware of negative social cues and highly sensitive to potential criticism or rejection, which leads to the development and maintenance of social anxiety (Buckner et al., 2010; Hofmann, 2007; Mogoaşe et al., 2014). Consequently, as their anxiety grows, they might interpret situations based on distorted biases, might become excessively self-conscious and socially inhibited, and might appear reserved, less assertive, less

responsive, and distant in social situations (Perowne & Mansell, 2002). Coping strategies, like being socially inhibited, can further isolate them, leading to misunderstandings, as others might misinterpret their actions as disinterest or disengagement. Critically, the very reactions they fear the most, being perceived as uninterested or negatively judged, may become a reality (Crozier & Alden, 2005). This cascade of events can result in social withdrawal, reduced perceived social support, and diminished relationship quality, ultimately leading to feelings of isolation and loneliness (Cacioppo & Cacioppo, 2018; Lieberz et al., 2022; Lim et al., 2016; Maes et al., 2019; Peplau & Caldwell, 1978). The experience of loneliness for individuals with SAD can be particularly distressing, impacting both their psychophysiological well-being (Lieberz et al., 2022; Quadt et al., 2020). In a meta- analytic review, loneliness has been recognized as a significant contributor to premature death, similar to smoking or obesity (Holt-Lunstad et al., 2010).

Inevitably, these coping strategies can also lead individuals with SAD to experience hypoarousal—a state of reduced physiological and psychological activation, making them feel numb, withdrawn, and disconnected from their surroundings (Ogden et al., 2006). Facing situations they cannot entirely avoid may trigger a sense of threat, prompting them to enter a hypoarousal state as a defense and survival mechanism (Rothbaum et al., 2007). This might allow them to cope with their anxiety, leading to avoidance, withdrawal, and detachment from the situation. More specifically, in this hypoarousal state, they may exhibit avoidant behaviours, become mentally "frozen" and emotionally numb, or even feel detached from themselves and their surroundings (Gostisha et al., 2014). It is essential to recognize that both hyperarousal and hypoarousal are just some of the responses that socially anxious individuals may experience. In the dance between hypo and hyperarousal as a defence mechanism, SAD manifests uniquely,

intertwining emotional experiences with bodily reactions. Social anxiety is a complex condition, and responses can vary based on past traumas, coexisting disorders, and other behavioural-somatic bodily coping mechanisms. Understanding these dynamics and seeking appropriate support can help individuals manage their social anxiety and improve their overall well-being.

Body Awareness

Body awareness is a multidimensional construct (Ogden et al., 2006) that describes the attentiveness to internal body processes, sense of self, and bodily responses to emotions and external stimuli (Price & Thompson, 2007). It is an essential aspect of cognition that (1) provides oneself with an understanding of inner bodily sensations (e.g., tight muscles), (2) contributes to the ability to identify a link between emotions and physiological state (e.g., relaxed, tense, anxiety), and (3) acts as the body's method to guide self-care (e.g., need for rest, attend to emotions linked to a stressful event) (Price & Hooven, 2018). Individuals who do not have a sufficient sense of body awareness are susceptible to a series of negative psychological consequences such as being unable to be aware of and attentive to internal bodily sensations, physical self-concept, emotions, and external stimulation in their daily life (Mehling, 2016).

Link Between Social Anxiety and Body Awareness

A significant link between bodily awareness and anxiety has been found in the world of psychiatry and neuroscience (Domschke et al., 2010). One study observed that when measuring bodily awareness of patients with anxiety disorder using self-report questionnaires (i.e., somatic sensations, thoughts, and feelings), patients with increased anxiety sensitivity reported hypervigilance for bodily sensations (Anderson & Hope, 2009). Similarly, in another studies utilizing the heartbeat detection task, findings indicated heightened cardiac interoceptive sensitivity in individuals with anxiety disorders (Domschke et al., 2010; Stevens et al., 2011;

Terasawa et al., 2013). In other words, people with social anxiety tend to focus on objective self-awareness in a social situation more than people who are not socially anxious. The extensive amount of time spent on bodily sensations leads to negative self-evaluation and increased anxiety (Cook & Newins, 2021). When individuals with social anxiety are exposed to an anxiety-evoking situation, one way to regulate negative emotions might be to consciously or unconsciously numb themselves, avoid the anxiety-evoking situations, or suppress the feelings and thoughts related to the acute stress (Aldao et al., 2010). These avoidance behaviours can lead to a deficit in cognitive processing, as well as changes to a person's response to trauma In a study by Daros and colleagues (2019), they observed that when people with higher social anxiety experience strong negative emotions, they are more inclined to use maladaptive survival strategies like suppressing emotions, getting distracted, or/and cognitive reappraisal (Daros et al., 2019). These maladaptive strategies of managing stress promote dysfunctional bodily awareness (such as flattening of affect and a reduction in emotion sensitivity/intensity)(Michelson & Ray, 1996). For example, Hoyer and colleagues (2013) found that dysfunctional bodily awareness (such as dissociating from bodily sensations) was significantly related to symptoms of social anxiety during performance situations in a college sample. More specifically, 92.9% of participants with social anxiety disorder reported at least one moderate dysfunctional bodily awareness symptom, while 76.4% reported at least one severe dysfunctional bodily awareness symptom during a social performance task (Hoyer et al., 2013). As such, for individuals with high social anxiety that were often unable to avoid traumatic, anxiety-evoking situations, autonomic numbing and suppressing emotions would be an unhealthy coping option available to regulate their stress in response to trauma (Michelson & Ray, 1996).

Theoretical Mechanisms Underlying the Link Between Body Awareness and Social Anxiety

Experiential Avoidance and Body Disconnection. Research has shown a significant association between SAD and experiential avoidance (Asher et al., 2021). The link between body awareness and social anxiety might be better understood through the theoretical mechanism of experiential avoidance and social anxiety. Experiential avoidance (EA) is a survival strategy that aims to manage or/and prevent unpleasant internal experiences, including distressing emotions, negative thoughts, and undesired physical sensations (Hayes et al., 1996). According to Chambers et al. (2009), when an individual is unwilling to face some of their experience, they are more prone to adopt avoidance strategies like distraction, rumination, suppression, or reappraisal to modify the occurrence and intensity of these related events (Chambers et al., 2009). Interestingly, in the context of social anxiety, individuals may use the experiential avoidance as a way to cope with the negative thoughts, emotions, and bodily sensations they encounter in social situations. This may involve distraction, numbing, dissociating, ruminating on their worries, suppressing their feelings, or reappraising the situation to reduce the intensity of their discomfort (Hayes et al., 1996). This body disconnection might hinder emotional processing and self-awareness, which in turn reinforces social anxiety in social situations. While avoiding unpleasant mental, emotional, and physical symptoms in social situations may provide temporary relief, consistently using these maladaptive regulatory and survival strategies has actually been shown to intensify the distress and physiological reactions (Campbell-Sills et al., 2006; Sleire, 2016). That means that traumatic experiences create a narrative where trauma echoes not just in the mind but also through the essence of body and psyche. Acknowledging these underlying mechanisms is vital in developing targeted interventions and treatments that address experiential avoidance and promote healthier

body awareness, so it aids individuals with social anxiety in enhancing their healthy coping strategies and overall well-being.

Trauma

Traumatic events, which can be defined as life-threatening or otherwise physically and emotionally harmful events and memories, often negatively impact several aspects of psychophysiological functioning (Butler et al., 2003; Center for Substance Abuse, 1999; van der Kolk, 2006). Trauma impacts individuals' biological and psychological systems by disturbing the harmonic normal functioning of the brain and body (De Bellis, 2014; Rosenbaum et al., 2014). Within the neural realm, trauma can cause alterations in the way the brain processes and regulates emotions (Schore, 2009). The amygdala, a region responsible for processing threat-related stimuli, can become overactive and hypersensitive in response to trauma and potential danger (Šimić et al., 2021). This can result in heightened anxiety, hyperarousal, hypoarousal, and an increased perception of threat even in non-threatening situations. Simultaneously, the prefrontal cortex, which is responsible for executive functions like decision-making and emotional regulation, may become impaired in its ability to modulate these intense emotional responses (Arnsten et al., 2015; Friedman & Robbins, 2022). This may contribute to difficulties in managing and regulating emotions effectively. Furthermore, trauma casts its shadow upon the hippocampus, a critical hub for memory consolidation, which is necessary for forming new explicit memories, and the amygdala, a component of the limbic system, which is responsible for the storage of previous somatic experiences such as threats and anger as implicit memories. These memories are not consciously accessible, but they have the potential to influence an individual's beliefs and behaviours (Haskell & Randall, 2019; Lanius et al., 2020; Rosenbaum et al., 2014). More specifically, these memories carry a strong emotional charge, making them

easily accessible for rapid association with future stressful or threatening situations. This rapid connection is a crucial aspect of implicit memory, as a vital survival mechanism, allowing for an immediate response to potential dangers (Haskell & Randall, 2019). Persistent trauma can lead to hippocampal atrophy, undergoing shrinkage, impairing the alliance of explicit memories, and creating difficulties in forming coherent narratives, meaning making, and/or differentiating past from present experiences (Collins et al., 2004; Park, 2022). This can lead to the sudden reexperiencing of the traumatic event via memories that are fragmented and intrusive, capable of evoking vivid and distressing recollections even in non-threatening situations (Bedard-Gilligan & Zoellner, 2012). On the other hand, persistent trauma in childhood can lead to enlargement of the amygdala and persistent trauma in adulthood can lead to larger amygdala volume, which eventually can induce changes in amygdala functioning (Oh, 2012).

On a physiological plane, trauma disrupts the operation of two branches of the autonomic nervous system, namely the sympathetic nervous system, the fight or flight branch, and the parasympathetic system, the rest and digest branch (Sherin & Nemeroff, 2011). This disturbance gives rise to psychophysical manifestations, thereby complicating the harmonious integration of mind-body connection. More specifically, individuals who have undergone traumatic events often experience over-excitation of the sympathetic nervous system, which interferes with the body’s normal response mechanism to stress, while experiencing under-excitation of the parasympathetic system (Crawford, 2010; Jenkins & Smart, 2020). In normal circumstances, the sympathetic nervous system promptly and adaptively responds to perceived threats, initiating the well-known fight-flight reaction (Sherin & Nemeroff, 2011). However, in cases of recurring trauma, the parasympathetic nervous system, responsible for mitigating the effects of the sympathetic response, can become overburdened, thereby disrupting the body's homeostatic

balance (Perry & Pollard, 1998) and resulting in “freeze”. This prompts the release of excessive stress hormones, including cortisol and adrenaline, culminating in the preparatory orchestration of the disturbed fight-or-flight response (Chu et al., 2023). Moreover, traumatic experiences have been shown to alter neurobiological functioning by impairing the HPA axis (Šimić et al., 2021), which is a critical network that regulates the behavioural response to stress (Kuhlman et al., 2015). HPA axis impairment results in increased levels of stress, anxiety, and hypervigilance (van Bodegom et al., 2017), as well as psychophysical manifestations that undermine traumatized people’s ability to integrate their bodily sensations and emotions (Herman et al., 2016). As a consequence, it might be difficult for traumatized people to be aware of and attentive to internal bodily sensations, emotions, and physical self-concept in everyday life. This could stem from their use of low body and emotional awareness as a coping mechanism against current and past traumatic stressors (Price, 2005). Van der Kolk proposes that traumatic experiences can become imprinted in both the mind and the body. More specifically, trauma is not solely limited to memories or emotions, but it can also manifest physically within the body. The multifaceted effects of trauma orchestrates a complex interplay between compromised neural functioning and disturbed somatic experiences, resulting in a mosaic of complex emotional, cognitive, and physiological responses (van der Kolk, 1994).

Types of Trauma

Nevertheless, it is important to consider the *type* of trauma that the individual has experienced. Depending on the type of trauma, the experience might differentially affect the traumatized individuals’ mental health and long-term and short-term cognitive, emotional, and physical functioning (Center for Substance Abuse, 1999). More specifically, interpersonal trauma (IPT) can be defined as a repetitive, chronic, and multifaceted social event that is

intentionally caused by a person(s) such as emotional abuse, physical or sexual assault, molestation, or domestic violence (Brown et al., 2016; Kuczyska, 2010). On the other hand, non-interpersonal trauma does not involve an interpersonal perpetrator (Lilly, 2011), and consists of traumatic experiences that take place outside of person-to-person relationships (e.g., natural disaster) and traumatic events involving other people when they are not perpetrating intentional impairment and harm (e.g., accidental car incident) (Holt et al., 2008; Sharp et al., 2017).

Both interpersonal and non-interpersonal traumas can result in core psychophysiological issues (Haldane & Nickerson, 2016). However, it is noteworthy that interpersonal trauma, particularly "social threats" like emotional abuse (such as swearing, humiliation, insults, and denigration), rejection, and emotional neglect (like emotional deprivation, abandonment, betrayal, or lacking a sense of belonging, loved, valued, or part of a nurturing environment), may elevate the risk of developing posttraumatic stress disorder (PTSD), body dissociation, and SAD, accompanied by symptoms encompassing emotional, somatic, cognitive, and interpersonal challenges (Boyer et al., 2022; Cuijpers et al., 2019). This contrast becomes more apparent when comparing it to the experience of non-interpersonal traumatic events (Jaffee, 2017). Interestingly, throughout people’s evolutionary trajectory, people have evolved as social creatures, relying on group dynamics for safety (Gilboa-Schechtman et al., 2014). The act of being ostracized from one's social group may have carried a comparable level of threat to physical aggression level, stemming from an evolutionary standpoint (Bjornsson et al., 2020). This social threat might be attributed to the fact that exposure to experiencing interpersonal trauma, which has the potential to disturb secure attachments with both oneself and others. Moreover, it is associated with an increased likelihood of influencing various aspects of an individual's social, psychological, and cognitive functioning. The aftermath of interpersonal trauma encompasses impacts on emotion

regulation, attentiveness and awareness, self-identity, self-image, self-respect, and social interactions (Cook et al., 2005; Courtois & Ford, 2009; Grey, 2010; Peters et al., 2022). Moreover, individuals who have undergone interpersonal trauma are at an high risk of developing a spectrum of psychological disorders (Jaffee, 2017; Peters et al., 2022). These may encompass notably anxiety and depression (Nanni et al., 2012; Peters et al., 2022).

Moreover, gender differences may exist in response to trauma type (Price & Thompson, 2007). For example, a study on refugees who experienced traumatic events investigated the relationship between psychological outcomes to trauma (i.e., anxiety, PTSD, and depression symptoms) and trauma type (interpersonal vs. non-interpersonal) as a function of gender. The results of the study demonstrated a significant relationship between interpersonal trauma exposure (vs. non-interpersonal trauma), PTSD symptoms, and anxiety symptoms (including social anxiety) in women, but a significant association between non-interpersonal (vs. interpersonal trauma) trauma exposure, PTSD symptoms, anxiety, and depression symptoms in men (Haldane & Nickerson, 2016). The differences in gender could be linked to the likelihood that women are more prone to encounter interpersonal trauma like sexual misconduct, harassment, and domestic abuse in adulthood or childhood physical and sexual abuse. In contrast, men are more likely to experience events such as fires, disasters, combat, accidents, and physical assaults (Breslau, 2001; Flett et al., 2004; Schwerdtfeger Gallus et al., 2015). Understanding the diverse impacts of interpersonal and non-interpersonal traumas is crucial to create a foundation for a comprehensive examination of how traumas influence mental health, somatic experiencing, cognitive functions, and emotional well-being.

Body Awareness and Trauma

Disturbed body awareness has been associated with somatosensory amplification that is often described as being intense, harmful, or stressful (Nakao & Barsky, 2007). This can give rise to persistent negative affect and emotional lability, as well as increased body-related hypervigilance in daily life, which consequently leads to maladaptive communication between mind and body (Ferentzi et al., 2017; Mehling et al., 2009). This link between impaired body awareness and increases in body sensation is believed to stem from broad disturbances in self-awareness that occur in traumatized people. More specifically, recollections of traumatic events, often tied to the body, can result in a distancing from and avoidance of bodily sensations, leading to a disconnection from one's own body (Gentsch & Kuehn, 2022; Scheffers et al., 2017). Body disconnection frequently emerges as a response to perceived threats that are seen as unescapable, overwhelming, or too painful (Farina & Imperatori, 2023; Kearney & Lanius, 2022). For example, studies results showed that impaired bodily awareness symptoms and emotion dysregulation are often observed in individuals who have experienced interpersonal trauma during childhood such as childhood maltreatment, especially sexual abuse (Dvir et al., 2014; Scheffers et al., 2017). This functions as a method to largely escape thoughts, emotions, or sensations connected to distressing memories (Trickett et al., 2011). Consequently, those who have experienced interpersonal trauma might struggle to acknowledge internal sensations and experiences, occasionally even rejecting any awareness of physical sensations (Price, 2005; van der Kolk, 2006). This phenomenon aligns with the concept described by van der Kolk (2015) as *the body keeps the score*. This concept suggests that intricate biological alterations are linked to the body's responses to trauma. More specifically, trauma and its associated experiences are not only stored in an individual's mind but also within their body. Trauma can lead to physical and physiological responses, causing disturbances in bodily awareness. These disturbances can

manifest as either decreased sensitivity or heightened sensitivity to bodily sensations, physical symptoms, and disruptions in one's sense of self and emotional regulation (van der Kolk, 2014, 2015). This can also manifest as reexperiencing bodily sensations linked to the trauma, even when these sensations are not directly connected to the traumatic event. Over time, all these things happening one after another can make people feel like they are being haunted and that they have lost control (van der Kolk, 2000). For example, one study found that in severe cases, the sensory and bodily reliving of traumatic events can occur unconsciously, pulling a person back into the physical and sensory dimensions of the trauma (Crawford, 2010b). This ties in with the dual representation theory (Brewin & Burgess, 2014; Kroes et al., 2011) (Brewin, 2011). In this theory, both explicit and implicit memories have essential roles in storing traumatic information. Explicit memory pertains to memories that can be consciously recalled, while implicit memory operates unconsciously and is frequently associated with physical somatic experiences and the intense reexperiencing of bodily sensations linked to the traumatic event (Brewin & Burgess, 2014; Bruijnen et al., 2019a). According to van der Kolk (2014), the "somatic memory" of trauma could lead to a sense of detachment from one's own body, with bodily signals perceived as threatening and as a survival mechanism. The Somatic Experiencing approach to trauma, advocated by van der Kolk (1994) and Payne and colleagues (2015), suggests that trauma gets "blocked" in the body. Naturally, our bodies are designed to react with fight, flight, or freeze responses in the face of danger. However, if these innate reactions are impeded due to the traumatic events, the unresolved defensive actions can linger within the body, persisting long after the traumatic event has passed (Payne et al., 2015; van der Kolk, 1994). This can result in persistent states of heightened or reduced arousal, which are commonly recognized as key indicators of trauma (Siegel, 1999). Impaired body awareness is just one way

that self-awareness is impacted by trauma. Trauma also affects attention, emotional expression, and meaning-making (Ogden et al., 2006). Consequently, trauma may affect intra- and extra-personal processes in traumatized individuals, which then impair traumatized people's ability to manage their symptoms. The exploration of disturbed body awareness in the context of trauma shows a critical link between psychophysiological responses and the intricate dynamics of interpersonal experiences. This connection forms a foundation for understanding how individuals, especially those with a history of interpersonal trauma, navigate complex emotional landscapes, influence intra- and extra-interpersonal dynamics, and develop survival mechanisms in the face of traumatic experiences.

Social Anxiety and Trauma

Research indicates that the likelihood of developing SAD is higher among individuals who have encountered trauma and prolonged stress (Bruijnen et al., 2019a). Specifically, interpersonal trauma, "social threat", in particular physical, sexual abuse, and emotional abuse, neglect, and bullying, is predictive for the onset of social anxiety and associated with symptom severity in SAD (Brühl et al., 2019; Dvir et al., 2014). Crucially, it is found that experiencing more interpersonal trauma during childhood appears to be associated with greater SAD severity in young adolescents and later in adulthood (Bruijnen et al., 2019b). One study's results emphasize that interpersonal trauma has the potential to induce self-blame, feelings of guilt, a self-critical perspective, heightened anticipation of negative social outcomes, reduced emotional control, and inadequate interpersonal communication skills for effectively managing challenging situations (Bruijnen et al., 2019b).

When someone experiences interpersonal trauma, especially in the context of social threats, they might internalize the belief that they are responsible for the traumatic event or that

they somehow deserved it (Kubany & Manke, 1995; Lebowitz & Roth, 1994). This self-blame and self-criticism might manifest as feelings of shame and guilt. The individuals may perceive themselves as flawed, unworthy, or fundamentally at fault for what happened to them (Lifton, 1988). This connection between trauma and self-blame can be particularly strong in cases of interpersonal trauma (Berman et al., 2018; Cavalera et al., 2018, 2022), where the violation of trust and personal boundaries can deeply affect one's sense of self. These feelings of shame and guilt can then become intertwined with the trauma itself, shaping the individual's emotional responses and influencing their perspectives on themselves and others. This intricate interplay between experiences of interpersonal trauma and the internalization of these traumatic events can also draw external attributions of blame from others such as victim-blaming attitudes (Chivers-Wilson, 2006). This vicious process might contribute to the creation of an environment that nurtures the development of more fear of criticism and more self-criticism, embarrassment, and shame. Consequently, this series of events might heighten the probability of an escalated risk for the development of SAD. As social anxiety develops, it can amplify these feelings, as individuals may perceive themselves as being under constant scrutiny, prone to negative judgment from others (Spurr & Stopa, 2002). This intricate dynamic creates a cycle where social anxiety fuels feelings of shame, while these very emotions contribute to intensifying the apprehension and distress associated with social anxiety (Hedman et al., 2013).

When traumatic events threaten an individual’s core assumptions, ABDT suggests that there is dysregulation of an anxiety buffer mechanism (Trifiletti et al., 2017). It has also been proposed that repeated traumatic events encourage individuals to believe that nothing (including their anxiety buffer) can keep them safe from danger (Pyszczynski & Kesebir, 2010). These dysfunctional mechanisms make people vulnerable and unprotected in the face of overwhelming

anxiety, which provokes clusters of hyperarousal and avoidance (Pyszczynski & Kesebir, 2011). Research focusing on individuals with SAD has revealed heightened activity within a specific brain area known as the amygdala (Rapee & Heimberg, 1997), which plays a pivotal role in activating our response to potential threats, and which can prompt the fight-or-flight reaction. In social situations, in socially anxious individuals, this automatic survival mechanism is likely to set off a cascade of symptoms, including accelerated breathing, a rapid heartbeat, tense muscles, digestive discomfort, elevated blood sugar, and an overwhelming surge of stress and anxiety (Ressler, 2010). The body's preparation for confrontation or escape is triggered. For individuals dealing with social anxiety, social interactions might be perceived as genuine threats (Rapee & Heimberg, 1997). This perception might activate the brain's evolutionary system for detecting danger, leading to a state of hyper-vigilance and heightened stress. Critically, interpersonal trauma provokes a persistent sensitization of the HPA-axis to mood and SAD (Elzinga et al., 2010; Juruena et al., 2020). This is because trauma is associated with increased cortisol reactivity to psychosocial stress in anxiety disorders such as SAD (Chopra, 2013). More specifically, Maeda et al. (2017) suggest that a decrease in cortisol reactivity results in avoidance behaviours, causing persistent fear responses, which in turn, may play a vital role in the maintenance and symptom severity of the psychopathology of social anxiety (Maeda et al., 2017). The present avoidance behaviours in SAD might lead individuals to have a fear of habituation to socially threatening situations, which in turn, causes the chain of persistent fear responses (Bruijnen et al., 2019a). As we explore social anxiety, disrupted body awareness, and the enduring effects of interpersonal trauma, a crucial insight arises. It highlights the deep link between trauma and how individuals navigate their physiological, cognitive and emotional coping strategies. This insight

prompts a profound exploration, unveiling the intricate interplay shaping the identification, expression, and integration of emotions and body sensations.

Alexithymia

Alexithymia is related to dysfunctions in the cognitive processing and regulation of emotions (Lumley et al., 2007), which includes (1) difficulties in identifying and verbalizing feelings, (2) difficulty with differentiating between feelings and bodily sensations, and (3) having limited fantasy capacity. These dysfunctional cognitive processing and emotion regulation strategies (including suppression, constriction of emotions, and experiential avoidance) (Bilotta et al., 2016; Clayton, 2004; Panayiotou et al., 2020) explain why alexithymic individuals inaccurately perceive their interoceptive sensations and encounter difficulties in effectively synthesizing somatosensory and bodily information from diverse sources (Grynberg & Pollatos, 2015; Hebert et al., 2013). This low somatic and affect awareness (deficiencies in awareness of internal experiences, interoceptive cues, and emotions in alexithymia (Duval & Wicklund, 1972) may be connected to emotional disorders, since these avoidances are types of coping mechanisms in response to trauma (Panayiotou et al., 2020). For example, in a previous study, researchers found a positive correlation between alexithymia and the degree to which people had experienced physical and emotional traumatic events during childhood, including rape (Berenbaum & James, 1994). That is because people who experienced interpersonal trauma (such as physical and sexual abuse in childhood), tend to use maladaptive emotional suppression as a coping strategy (Leitenberg et al., 1992), which exacerbates the difficulties in identifying, perceiving, and verbalizing feelings (Thomas et al., 2011). This coping mechanism is likely to underlie psychopathology (such as depression and social anxiety) and significantly impact their maintenance (Glick & Orsillo, 2011). More specifically, although avoidance of feelings provides

relief in the short term, emotional and somatic avoidance has contradictory effects such as increasing the occurrence, difficulty, and approachability of undesirable experiences (Campbell-Sills et al., 2006; Panayiotou et al., 2020).

Alexithymia and Social Anxiety

Numerous studies have found an association between social anxiety and alexithymia, as individuals with social anxiety often exhibit diminished expressiveness in expressing their emotions and tend to score higher on Toronto alexithymia scale (TAS-2 in the "Difficulty Describing Feelings" and "Difficulty Identifying Feelings" factors of alexithymia, than individuals experiencing different anxiety disorders (Dalbudak et al., 2013; Marchesi et al., 2000; Turk et al., 2005). The need for social approval and fear of public speaking in social anxiety have been found to characterize the symptoms of alexithymia (Grynberg & Pollatos, 2015; Panayiotou et al., 2020). More specifically, symptoms of alexithymia and social anxiety are characterized and linked by complex factors, such as a high degree of emotional suppression, low emotion awareness, low self-consciousness, and experiential avoidance (Kashdan et al., 2014). Individuals with social anxiety (who are high in alexithymic traits) have been found to report diminished distinctions between negative emotions (Kashdan et al., 2013; Kashdan & Farmer, 2014), and exhibiting reduced awareness of emotions compared to control group (Kashdan et al., 2014). Based on the results of the study by Kashdan et al. (2013), it has been concluded that the lower awareness of feelings of social anxiety is caused by the effort to avoid negative emotions and somatic body sensations that occur in response to encountering a stressful social situation (Kashdan et al., 2013).

Alexithymia and Body Awareness

Body awareness and alexithymia are bidirectionally correlated with each other. Both body awareness and alexithymia are characterized by deficits in the cognitive processing and regulation of emotions (Taylor et al., 1997), which are associated with poor emotional awareness (Lane et al., 2000). More specifically, a correlational study found that body awareness was a significant predictor of alexithymia, especially the inability to identify and describe emotions (Longarzo et al., 2015), and an experimental study's results demonstrated a negative correlation in which high alexithymia was a marker of atypically low awareness of inner body sensations (Murphy et al., 2017, 2018). Moreover, patients with eating disorders, characterized by poor inner body awareness, are likely to have higher alexithymia levels, especially difficulties with identifying, regulating, and communicating feelings (Nowakowski et al., 2013; Spoor et al., 2005). Critically, although body awareness and alexithymia are associated with each other, they are different constructs. While alexithymia refers specifically to emotional awareness, body awareness (as a multidimensional construct) sometimes encompasses emotional awareness in addition to the physical aspects of body awareness. Navigating the interconnected realms of body awareness and alexithymia shows a bidirectional correlation. This intricate connection opens the door for an exploration into how trauma intertwines with cognitive and emotional processing. Subsequently, the literature review shows the nuanced interplay that delves into the profound impact of traumatic experiences on the intricate dance of cognitive and emotional regulation in identification, expression, and understanding of emotions and sensations.

Alexithymia and Trauma

Alexithymia is likely to develop as a reaction to traumatization, occurring both in childhood and in adulthood (Eichhorn et al., 2014). Repeated traumatic experiences negatively affect the nervous system's susceptibility to stress (Mehling et al., 2009). For example, a study on

refugees reported a positive correlation between alexithymia and the number of traumatic experiences (Park et al., 2015). Alexithymia can be considered an unconscious, maladaptive, inhibitory reaction to a traumatic event (Franzoni et al., 2013). To prevent emotional exhaustion, an inhibitory mechanism, the fight, flight, or freeze system, may be activated to prevent intense, negative emotions (Meganck et al., 2013) and to avoid frightening or intolerable feelings (Fang et al., 2020). This stress prevention response aims to protect the individual from internalizing the traumatic experience in the long-term as a new schema about themselves and the world around them (Horowitz, 1993). Individuals who experience trauma subconsciously adopt alexithymia to prevent themselves from accessing internal unresolved feelings accumulated in the body that bring about anxiety and stress (Chung et al., 2016). For example, neuroimaging research that investigated the effects of early childhood trauma found that there was a significant association between the experience of emotional neglect during childhood and the degree of alexithymia (Aust et al., 2013). Similarly, another study revealed that early childhood interpersonal trauma (such as emotional abuse and neglect) led to the development of alexithymic traits such as difficulty with identifying feelings (Brown et al., 2016). Based on the aforementioned studies, the results provide additional support that complex or multiple traumatizations, particularly interpersonal trauma, tend to increase the risk of alexithymia.

The Link Between Body Awareness, Trauma, And Alexithymia as an Underlier of Social Anxiety

The connection between body awareness, trauma, and alexithymia plays a pivotal role in the development and exacerbation of social anxiety. Trauma profoundly impacts the brain and body, leading to neural alterations that disrupt emotional processing and regulation (Kearney & Lanius, 2022). Physiologically, trauma disrupts the operation of the sympathetic and

parasympathetic nervous systems (Corrigan et al., 2011). This disturbance gives rise to psychophysical manifestations, thereby complicating the harmonious integration of bodily sensations and emotions (Lahousen et al., 2019). Trauma also impairs cognitive and affective processing, hindering an individual's ability to manage their symptoms effectively (Craparo et al., 2013). These disturbances are linked to damage to the HPA axis and deficits in body awareness, resulting in alexithymia (Ibañez et al., 2010), causing a disconnection from one's body through the damage. Individuals who have experienced interpersonal trauma may struggle to acknowledge internal sensations and express emotions, complicating the processing of traumatic memories (van der Kolk, 2002). Both body awareness and alexithymia are mutually intertwined, with deficits in cognitive processing, disturbance in response to stress, and regulation of emotions contributing to poor emotional and bodily awareness (Longarzo et al., 2015; Murphy et al., 2017). Trauma can act as a catalyst, increasing the risk of disturbed bodily awareness, alexithymia, and social anxiety (Bruijnen et al., 2019b; Scheffers et al., 2017; Zorzella et al., 2020). Several studies on anxiety disorders and other mental health conditions have highlighted altered activity in brain regions such as the medial prefrontal cortex (mPFC), insula, and anterior cingulate cortex (ACC), all implicated in emotional processing, making sense, self-representation, and bodily self-consciousness (Alexandra Kredlow et al., 2022; Etkin et al., 2011; Shin & Liberzon, 2010; Yoon et al., 2019). These disturbances can be attributed to traumatic experiences and insular cortex damage, leading to poor self and body awareness and alexithymia (Ham et al., 2014; Klein et al., 2013; Patrikelis et al., 2019; Seth et al., 2012). The intricate interplay between body awareness, trauma, alexithymia, and social anxiety underscores the complexity of social anxiety's etiology. Understanding these interconnected factors is essential in both research and clinical practice, as it offers potential avenues for targeted

interventions such as dialectical behavioural therapy and improved therapeutic approaches to help individuals with social anxiety enhance their coping strategies and overall well-being.

What Is Dialectical Behavioural Therapy?

The therapeutic approach known as dialectical behavioural therapy (DBT) was formulated and pioneered by Marsha Linehan in the early 1990s (Linehan, 1993). Linehan originally developed DBT to support individuals diagnosed with Borderline Personality Disorder (BPD) dealing with challenges such as self-harm, suicidal behaviours, and a history of psychiatric hospitalizations (Chapman, 2006, 2019). Linehan aimed to create a principle-driven, multi-faceted therapy modality that incorporates insights from behaviour therapy, cognitive therapy, and learning theory for emotional regulation and reality testing as well as dialectical and oriental philosophy, including distress tolerance, acceptance, and mindful awareness (Linehan, 2018). DBT treatment suggests that a comprehensive form of psychotherapy should fulfil five essential functions: firstly, it should enhance and sustain the client's motivation to establish change, which entails collaborative engagement between clients and therapists, as well as the development of clear guidelines and boundaries for client behaviour. Secondly, it should strive for optimal results by supplementing the client's skills through a combination of resources, including skills groups, phone coaching, in vivo coaching, and assigned homework. Thirdly, it should support the generalization of the client's newly learnt skills. Fourthly, it should strengthen the therapist's motivation to continue therapy and also enhance their skills and abilities, potentially achieved through group consultation and mutual support among co-therapists. Lastly, it should establish a structured environment beneficial to the implementation of treatment, which may include involving families in the therapeutic process to ensure their active involvement with the client (Chapman, 2006; Linehan, 1993; Lynch et al., 2003).

Dialectical Behaviour Therapy (DBT) operates within a biosocial model, studying the challenges individuals face when managing emotions effectively, both over and under control, and behaviours in diverse life situations. The biosocial hypothesis, central to DBT, suggests that emotion dysregulation can be traced back to environments fostering heightened emotional sensitivity and reactivity, often due to socially threatening experiences, specifically, invalidating conditions, encompassing neglect, exclusion, abandonment, abuse, or subtler forms of discouragement, punishment, or dismissal of a child's emotional responses (Crowell et al., 2009; Koerner, 2013). The biosocial through the lens of Henriques' Unified Paradigm hypothesis posits the mismatch between caregivers' style and temperament and the child's unique biopsychosocial disposition could also lead to invalidation (Cechak, 2021; Henriques & Glover, 2011). A combination of biological vulnerability and environmental invalidation might result in widespread dysfunction in a child's ability to regulate emotions (Crowell et al., 2008). Heightened emotional responses in children correlate with a greater likelihood of experiencing invalidation from their surroundings, as evidenced by Linehan's findings (Linehan, 1987; 1993). Individuals often learn to respond to socially threatening and invalidating situations and their feelings with self-invalidating and self-reinforcing emotions like anxiety, shame, impulsivity, emotion dysregulation, and fear, which Linehan calls "full system response" that include physiological, expressive, and cognitive components (Kuo & Linehan, 2009; Musser et al., 2018). Consequently, Linehan suggests that an individual's socially threatening surroundings and negative childhood experiences play a pivotal role in shaping their capacity to understand and manage emotional and behavioural responses efficiently (Linehan, 1987). This intricate interplay between the individual's biosocial state and their invalidating environment might lead to heightened vulnerability and dysfunctions, marked by emotional, behavioural, and cognitive

dysregulation, including, anxiety, severe mood swings, disrupted mind-body connections, interpersonal deficits, difficulties in forming a stable self-concept, feelings of emptiness, impulsive behaviours, self-harm, and a spectrum of associated challenges, including cognitive lapses such as dissociation (Chapman, 2019; Crowell et al., 2009).

What Does Dialectical Mean?

In DBT, dialectics often involve the synthesis of two opposing elements and emphasize the importance of maintaining a simultaneous balance between different aspects of reality. Specifically, dialectics promote a perspective that embraces both/and rather than either/or (Linehan, 1987). In Dialectical Behaviour Therapy (DBT), the central dialectic revolves around the apparent contradiction between acceptance-oriented strategies and change-oriented strategies. This dialectic combines change techniques rooted in behaviourism with acceptance approaches influenced by Zen Buddhism (Linehan & Schmidt, 1995).

From a client's perspective, DBT can be described as a therapeutic framework that embodies the essence of the Serenity Prayer: seeking the serenity to accept the things beyond one's control, the courage to change the things that can be changed, and the wisdom to distinguish between the two (Sweezy, 2011). For therapists, it is imperative to acknowledge and accept clients as they are while simultaneously recognizing their aspirations for change and personal growth. Every skill and strategy employed in DBT is designed to strike a delicate balance between fostering acceptance and facilitating meaningful change (Fasulo et al., 2015).

DBT Interventions for Social Anxiety

Although DBT was originally designed for the treatment of borderline personality disorder (BPD), DBT has been adapted to address symptoms of anxiety related conditions within the framework of BPD (Chapman, 2006). Specific main features of BPD addressed in DBT

include experiential avoidance—efforts to modify the nature or frequency of undesirable internal experiences, encompassing emotions, thoughts, memories, and bodily sensations (Hayes et al., 1996; Linehan, 1993; Orsillo & Roemer, 2005). These experiential avoidance characteristics are prevalent in anxiety disorders as well (Salters-Pedneault et al., 2004), suggesting that a similar approach could be beneficial in addressing them. Therefore, DBT techniques for social anxiety might offer guidance and supportive treatment. DBT has the potential to assist individuals in enhancing skills across four key areas: (1) mindfulness, which cultivates awareness of the present moment and facilitates effective decision-making; (2) distress tolerance, which involves managing crises and distressing situations with minimal adverse long-term consequences; (3) emotion regulation, aimed at promoting effective coping with daily emotional responses; and (4) interpersonal effectiveness, focused on developing and sustaining healthy interpersonal relationships (Southward et al., 2022). Moreover, DBT therapy might work by helping clients recognize their triggers, choose appropriate coping strategies, and practice more mindfulness, change, and acceptance (May et al., 2016). The core components of DBT for social anxiety might include mindfulness of thoughts that stand in the way of interpersonal effectiveness, assertiveness skills, relationship skills, and self-respect skills (Accardo, 2020; Gratz et al., 2005). That means that individuals learn skills to aid them in getting what they want and need from others, to build healthy relationships and to end destructive ones, and to be mindful of themselves and others. Through DBT, individuals with SAD might learn to observe anxiety-related thoughts without judgment, which could lead to the understanding that these were "thoughts only", and do not necessarily represent reality or truth, nor should they lead to escape or avoidance behaviours (Baer, 2015; Hofmann & Gómez, 2017). Additionally, DBT might help individuals with SAD observe their mood and its physiological, mental, behavioural, and

emotional consequences through behavioural and self-observation exercises (McKay et al., 2019).

Effectiveness of DBT for SAD

Recent research found that DBT interventions helped individuals with social anxiety learn how to better manage their symptoms, emotions, and behaviours (Afshari & Hasani, 2020). This is supported by the findings of the study by Astaneh et al. (2020). It was found that DBT was influential on the fear of negative evaluation and communication skills among adolescents with SAD (Astaneh et al., 2020). It was found that DBT training increased their communication skills while reducing their fear of negative evaluation, which was in line with another study conducted by Razian et al. (2018) as their findings showed that mindfulness-based group therapy improved fear of negative evaluation among a sample of Iranian individuals with SAD. Moreover, another study found that using DBT skills more frequently (mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness) mediated the difference in reductions in anxiety and emotion regulation (Southward et al., 2022). Moreover, a review on DBT group therapy that targets the specific etiology and maintenance elements of SAD and suicidal ideation reveals that DBT group therapy with the focus on four skills mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness is effective in reducing symptoms in SAD that impacts social and emotional functioning and suicidal ideation (Villalongo Andino et al., 2024).

Synthesis and Summary

The synthesis of scholarly insights underscores the core objective of my thesis, delving into the intricate dynamics of social anxiety, disturbed body awareness, trauma, and alexithymia. Extensive research underscores a heightened propensity for individuals who have experienced

trauma, particularly interpersonal social threats, to develop both SAD, disturbed body awareness, and alexithymia (Bruijnen et al., 2019b; Scheffers et al., 2017; Zorzella et al., 2020). SAD unfolds as an emotional rollercoaster, rooted in the fear of judgment and scrutiny, prompting individuals to adopt coping strategies that lead to states of hyperarousal or hypoarousal (Buckner et al., 2010; Hofmann, 2007; Mogoaşe et al., 2014). This spectrum of responses manifests uniquely in the dance between hyperarousal and hypoarousal, intertwining emotional experiences with bodily reactions (Aldao et al., 2010; Anderson & Hope, 2009; Cook & Newins, 2021; Gostisha et al., 2014; Ogden et al., 2006; Rothbaum et al., 2007).

Navigating social anxiety often involves avoidance behaviours, perpetuating a cycle of cognitive deficits and dysfunctional bodily awareness. Maladaptive regulation strategies, such as emotional suppression and distraction, paradoxically intensify dysfunctional bodily awareness, reinforcing symptoms of social anxiety. The theoretical mechanisms of experiential avoidance and body disconnection become central, reflecting efforts to manage unpleasant internal experiences, resulting in a disconnection from one's own body or heightened awareness of bodily cues (Asher et al., 2021; Campbell-Sills et al., 2006; Chambers et al., 2009; Hayes et al., 1996; Sleire, 2016).

Trauma further complicates this intricate dance, manifesting as heightened anxiety, hypoarousal, hyperarousal, and increased threat perception. The amygdala becomes overactive, while the prefrontal cortex struggles to regulate emotional responses, shaping emotional experiences and bodily responses. Disruption to the sympathetic and parasympathetic nervous systems leads to psychophysiological manifestations, complicating the harmonious integration of mind and body connection (Brühl et al., 2019; Bruijnen et al., 2019b; Corrigan et al., 2011; Lahousen et al., 2019).

Recollection of traumatic events often prompts a distancing from and avoidance of bodily sensations, resulting in body disconnection as a response to perceived threats deemed inescapable, overwhelming, or too painful. Repeated trauma events foster a belief that nothing, including the anxiety buffer, can ensure safety, rendering individuals vulnerable in the face of overwhelming anxiety (Ferentzi et al., 2017; Gentsch & Kuehn, 2022; Mehling, 2016; Pyszczynski & Kesebir, 2011; Trifiletti et al., 2017).

Research highlights heightened amygdala activity in individuals with SAD, perceiving social interactions as genuine threats and activating the brain's evolutionary danger-detection system. Trauma sensitizes the HPA axis, intensifying cortisol reactivity and potentially leading to avoidance. The concept of "the body keeps the score" emphasizes that trauma is stored not only in the mind but also within the body, causing disturbances in bodily awareness and emotional regulation (Elzinga et al., 2010; Juruena et al., 2020; van der Kolk, 1994). Examining the connections among social anxiety, disturbed body awareness, trauma, and alexithymia reveals a pronounced association, indicating a bidirectional correlation with one another. Alexithymia emerges as a response to trauma, inhibiting intense feelings of negative emotions and sensations to protect the self (Brown et al., 2016; Chung et al., 2016; Fang et al., 2020; Franzoni et al., 2013; Meganck et al., 2013; Murphy et al., 2018).

Shifting focus to DBT, its practical applications extend beyond its original scope, proving effective in targeting SAD symptoms. The main findings of this project underscore the adaptability and usefulness of DBT as a tailored intervention for social anxiety. By addressing not only symptoms but also the underlying biopsychological patterns and etiologies, DBT equips individuals with social anxiety with a holistic set of skills. The incorporation of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness within the DBT

framework proves instrumental in empowering individuals to navigate and overcome the challenges associated with social anxiety (Afshari & Hasani, 2020; Chapman, 2006; Southward et al., 2022). The next chapter will discuss the limitations and applications.

Chapter 3: Discussion, Applications, and Conclusions

This chapter will explore the limitations and gaps identified in the current literature, emphasizing the ongoing need for future research in this field. Finally, I will outline a proposed workshop integrating DBT techniques, specifically designed for individuals dealing with SAD.

Limitations and Gaps within the Current Literature

Throughout the review and analysis of research for this capstone project, it is essential to acknowledge the presence of some gaps and limitations in the existing literature as well as issues that were outside the scope of this study. Firstly, in the studies by Hayes et al., 1996, Linehan, 1993, and Salters-Pedneault et al., 2004, while the application of DBT to treat anxiety-related symptoms within the context of BPD is discussed, the generalization of DBT's effectiveness for social anxiety is made without specific attention to the unique characteristics and nuances of SAD. Social anxiety involves distinct cognitive and behavioural patterns, and it remains unclear how well DBT, originally designed for BPD, translates to the specific challenges posed by social anxiety. Therefore, future research might endeavour to produce more understanding of the comparative effectiveness of DBT for SAD.

Secondly, although recent cited research in this project shed light on the effectiveness of DBT for SAD, within the studies there are small sample sizes, lack of proper randomization, reliance on self-report measures, lack of long-term follow ups, limited exploration of cultural factors, and minimal randomized controlled trials and comparative studies to determine the effectiveness of a DBT approach for anxiety, specifically SAD. Therefore, caution is required in interpreting and generalizing the results of the literature reviewed in this project. It is important to note that the aforementioned issues within the cited literature weakens the overall reliability of

the conclusion. A more in-depth examination of the individual studies' methodologies is crucial to assess the strength of the evidence supporting DBT's effectiveness for SAD.

For example, the study done by Afshari and Hasani (2020) has a sample size of 72 participants, which is relatively small, and though providing valuable insights, raises concerns about statistical power and the generalizability of the findings to a broader population. Additionally, the study's limited follow-up duration of three months leaves unanswered questions about the durability of the observed improvements over an extended period. Moreover, despite the important understandings provided by this study by Astaneh et al. (2020) on the efficacy of DBT based skills training for adolescents with SAD, several limitations warrant consideration. The quasi-experimental design employed raises concerns about establishing causal relationships between the intervention and observed outcomes. Also, the reliance on convenience sampling introduces potential selection bias, hindering the generalizability of findings to a broader adolescent population. A more diverse and representative sample would enhance the external validity and applicability of the results to a broader population of adolescents with SAD. Lastly, the short-term follow-up duration leaves uncertainties regarding the durability of changes in fear of negative evaluation and communication skills over an extended period.

Similarly, a study on mindfulness-based treatment for SAD by Shairi et al. (2018) has a relatively small sample size of 21 of Iranian subjects with SAD and raises concerns about the generalizability of the findings. The limited number of participants may not adequately represent the diverse spectrum of individuals with SAD and the results may not be applicable to a broader population. Additionally, the lack of a more extensive control group and the absence of randomization in the assignment of participants to the mindfulness and control groups could introduce bias into the study. A randomized controlled trial design with a larger and more diverse

sample would enhance the study's internal validity. The reliance on self-report measures, such as the Social Phobia Inventory (SPIN) and the five-facet mindfulness questionnaire, poses another limitation. Self-report measures are susceptible to response biases, and participants might provide socially desirable answers, especially when assessing constructs like mindfulness. The use of more objective measures or a combination of self-report and observational methods would strengthen the study's methodological consistency and accuracy. Furthermore, the study's focus on mindfulness skills is valuable, but the absence of long-term follow-up data limits the understanding of the sustained effects of the Mindfulness-Based Stress Reduction (MBSR) program. Longitudinal assessments would provide insights into whether the improvements in mindfulness skills sustain over time and whether there are lasting effects on social anxiety symptoms. The study by Southward et al., 2022) contributes valuable information about the within-person dynamics of DBT skill use and effectiveness in addressing anxiety and emotional dysfunction. However, its limitations, including a small sample size of 19 individuals, reliance on self-report measures, short-term focus, and the lack of exploration of moderating variables, underscores the need for cautious interpretation and suggests avenues for future research to build upon these findings.

Furthermore, while the literature reviewed throughout this capstone project provides valuable and comprehensive insights into the complex interplay among SAD, disturbed body awareness, trauma, and alexithymia, several limitations in the presented information should be considered. Firstly, the reviewed literature primarily focuses on the theoretical aspects of the interplay between these variables. Future research could benefit from more empirical studies, including experimental design, longitudinal approach, or intervention trials, in addressing the identified dynamics. Additionally, the links between social anxiety, body awareness, trauma, and

alexithymia are complex, and further exploration of potential moderating variables and the nuances that may influence this relationship is necessary. Furthermore, this project mentions the use of maladaptive regulatory strategies by socially anxious individuals, but a deeper examination of the consequences of these strategies is needed for a more thorough understanding. It would be valuable to explore how these strategies impact not only the immediate distress but also the long-term well-being of individuals with social anxiety. Moreover, the theoretical mechanisms discussed, such as experiential avoidance, require empirical validation within the specific context of social anxiety and body awareness. Lastly, the generalization of findings to diverse populations or cultural contexts is limited, and a more inclusive exploration of these dynamics across different demographic groups could enhance the applicability of the presented insights. Given the cultural context's significant influence on mental health, future studies should explore these factors more comprehensively.

In conclusion, while the literature reviewed provides a comprehensive overview of the complex relationships among SAD, disturbed body awareness, trauma, and alexithymia, these limitations underscore the need for continued research. Addressing these limitations would contribute to a more nuanced and evidence-based understanding, facilitating the development of tailored interventions for individuals struggling with the multifaceted components of social anxiety.

Application: Workshop

This workshop proposal aims to spotlight Dialectical Behavioural Therapy (DBT) and its practical applications for SAD and its underlying causes, emphasizing transformative outcomes for individual well-being. It is based on the cited research and literature reviews discussed earlier in chapter two. Building on Marsha Linehan's works (van der Kolk, 2000), the workshop delves

into core DBT modules, including mindfulness, stress tolerance, interpersonal effectiveness, assertiveness, relationship skills, and self-respect. Clients will explore Linehan's DBT-based modules (Linehan, 2014; Linehan, 2015) on SAD, integrating exercises and interventions into the session. To facilitate ongoing learning and improvement, clients will receive suggested readings and workbooks. This carefully designed training exceeds a typical workshop; it's a journey toward mastering DBT for enduring wellness through a holistic lens. Upon completion, clients should be equipped to:

- Have an understanding of what SAD is and how it presents for individuals, with an additional understanding of comorbidities with mental health;
- Have a broader understanding of DBT. Apply DBT principles effectively to address SAD and its root causes;
- Demonstrate proficiency in mindfulness, stress tolerance, interpersonal effectiveness, assertiveness, and relationship and self-respect skills;
- Increase mindful awareness through the development of skills and tools to notice and become more aware of the effects of SAD;
- And have an array of tools, techniques, and exercises post-workshop for sustained management and wellbeing.

The service delivery of standard DBT includes weekly one hour individual DBT, weekly two and a half hours of group DBT, 24/7 phone coaching, and a weekly consult group for 24 weeks. The proposed workshop will include the following components:

- Pretreatment Assessment
- Therapists’ Roles
- Clients’ Roles

- DBT: Individual Therapy
- DBT: Group Therapy
- Skills Coaching
- Consultation Team
- Important components in DBT
- Experiential component: DBT Exercises for Social Anxiety
- Additional Recommended Learning

Pretreatment Assessment

The pretreatment assessment is designed to clinically evaluate presenting issues, goals, and past and present life-threatening behaviours and ideations. This assessment serves multiple purposes, including (1) determining the suitability of skills training for the client; (2) deciding on the treatment intensity and tailoring the type of skills training needed for the specific client; (3) orienting the client to the specifics of the skills training; (4) enhancing motivation for therapy and fostering a collaborative commitment to engage in skills training; and (5) establishing the groundwork for the therapeutic alliance (Center for Substance Abuse Treatment, 2014; Linehan, 2015). Each of these stages is systematically addressed during the initial individual intake session with each client before their admission to individual and/or group therapy.

Determining the Intensity of Treatment and Type of Skills Training Needed - Stages and Levels of DBT

Determining the intensity of treatment is a crucial aspect, recognizing that clients enter therapy at various stages of their disorder and may fluctuate between these stages. The assessment process plays a vital role in determining whether a client needs more comprehensive treatment beyond standard DBT or stand-alone therapy (Linehan, 2015). DBT treatment is

structured into four stages. Starting with stage one, which focuses on trauma informed foundational skills, criteria often include a current severe mental disorder and severe behavioural problems. Stage two targets the replacement of despair with healthy emotional, bodily, and cognitive experiences, continuing with trauma-informed DBT interventions. Stage three aims at achieving ordinary happiness and addressing ongoing daily life problems, enhancing self-respect and self-esteem. Progressing to stage four, the goal is to resolve the sense of inadequacy, shame, and guilt, and attain freedom from emotional pain, ultimately culminating in finding meaning and purpose (Koerner & Dimeff, 2007; Linehan, 2015). Some clients may primarily benefit from individual therapy to gain basic skills and increase control over specific behaviours before transitioning to group therapy. This approach ensures a comprehensive and effective well-being strategy (Linehan, 2015; Malhotra & Baker, 2023; Substance Abuse and Mental Health Services Administration, 2005). For example, addressing social anxiety might start with individual therapy to establish foundational skills before transitioning to group therapy.

Therapists' Roles in the Therapy

The therapist plays a multifaceted role in skills training and assumes the primary responsibility for treatment planning (Fassbinder et al., 2016). This encompasses various crucial tasks, such as crisis management, where the therapist collaboratively establishes safety plans and provides coaching during suicidal crises (Stanley et al., 2009). Additionally, the therapist organizes and oversees crises calls, planning for someone to handle these calls. Decisions on modifying and designing treatment based on individual client needs rests with the therapist, who also exercises professional judgment to determine if admission to higher-level care is necessary or the number of rounds of skills training required (Linehan, 2015).

A profound understanding of DBT skills is central for the therapist to effectively use the treatment strategies and have detailed protocols and guide clients, respond appropriately to situations, and select skills tailored to specific problems (Linehan, 2015). Regular assessment and monitoring of client progress, accompanied by providing appropriate feedback on specific behaviours, are integral components of this process. This involves reviewing diary cards, conducting behavioural chain analyses, and addressing any encountered obstacles or setbacks (Linehan, 2015).

The therapist engages clients in behavioural rehearsals within real-life situations to apply learned skills, facilitating their application to enhance functioning (Swales & Dunkley, 2020) and alleviate social anxiety. Assigning homework further promotes skill application between sessions, with therapists offering a range of worksheets and reinforcing completion. When clients encounter difficulties in completing homework, the therapist conducts behavioural chain analyses to identify setbacks and address underlying issues, demonstrating a keen awareness of the clients' world (Edwards et al., 2021; Linehan, 2014; Rizvi et al., 2013).

Cultural competence is a foundational aspect of the therapist's role. Being attuned to clients' cultural backgrounds, values, and norms is essential. Acknowledging, recognizing, respecting, and validating clients' culture and values contributes to ethical, inclusive, and effective care, fostering a stronger therapeutic alliance. The therapist tailors approaches based on clients' needs, recognizing the culture, values, lived experiences (Asnaani & Hofmann, 2012) and expression of social anxiety.

In both individual and group therapy sessions, the therapist provides a safe space for collaborative decision-making. The therapist ensures adherence to ethical principles of confidentiality. Maintaining healthy professional boundaries and avoiding potential dual

relationships is imperative in both individual and group settings. The therapist also undertakes the role of a social justice advocate, addressing systemic factors (Canadian Counselling and Psychotherapy Association Code of Ethics [CCPA], 2020) contributing to social anxiety symptoms and incorporating a sociocultural perspective into treatment to promote equity.

Acting as a secure and safe attachment figure both in individual and group therapy sessions is important (Taylor et al., 2015). In group settings, it requires the therapist to navigate varying interpersonal dynamics. The therapist's skills in managing interpersonal crises, demonstrating healthy responses, respecting differences, and working through conflicts are essential for fostering a constructive and respectful group environment (Linehan, 2014). Therapists become a role model to the clients. The therapists provide examples of appropriate responses through role plays, video recordings, printed materials, and films. They teach problem solving skills by utilizing contingency management, exposure-based procedures, and cognitive restructuring (Linehan, 2014). The therapist's multifaceted role thus encompasses clinical expertise and skills, cultural sensitivity, ethical considerations, and a commitment to social justice advocacy.

Clients' Role in the Therapy

Clients engaging in the skills training group therapy includes several responsibilities to optimize their learning experience. Firstly, they are expected to maintain confidentiality in group sessions, attend both individual and group sessions punctually, and commit to thorough skill practice (Bernard et al., 2008). In group sessions, it is essential for clients to validate each other, refrain from passing judgment, and offer constructive feedback when requested. Accountability is emphasized, with clients notifying ahead if they'll be late or miss a session. The official exit from the program occurs only after missing four consecutive sessions. Clients are also urged to

abstain from influencing others toward problematic behaviours, abstain from substances during sessions, and refrain from discussing contagious behaviours. Building confidential relationships outside the group and engaging in private activities are discouraged in order to foster an open and respectful group dynamic (Linehan, 2014).

Dialectical Behavioural Therapy: Individual Therapy and Skills Training

Individual DBT therapy strives to instil the concept of "a life worth living" by teaching essential skills to clients, which eventually enable them to navigate challenges with mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Hayrynen, 2022). The skills training program encompasses weekly sessions lasting 1 hours. This therapy requires commitment from both clients and therapists, tailoring the agenda to address current problems. It emphasizes increased awareness, motivation, and skill generalization to manage life's obstacles effectively (Linehan, 2014). Key aspects involve learning coping mechanisms, disrupting negative patterns, fostering awareness of thoughts, bodily sensations, emotions, and behaviours. Safety issues, therapy-interfering challenges, and quality-of-life concerns are addressed (DeSerisy et al., 2023; Marks, 2022) collaboratively, employing techniques like diary cards. Clients can track their daily symptoms and utilized skills through a diary card, which is required to be reviewed in every session (Stepp et al., 2008). Both within sessions with the therapist and outside sessions, clients themselves conduct chain analyses and missing links analyses to analyse behaviours targeted for change. Additionally, solution analyses are used to determine beneficial skills tailored to specific situations (Linehan, 2014; Marks, 2022). In a collaborative effort, clients and therapists embrace a dialectical perspective, seeking a balance between acceptance and change (Chapman, 2006). Acceptance includes validation, mindfulness, and radical acceptance, which refers to embracing and fully acknowledging the reality of a situation without

judgment or resistance, while change includes skills, behaviours, contingency management, and dialectical strategies (Linehan & Wilks, 2015).

Dialectical Behavioural Therapy: Group Therapy and Skills Training

Embarking on the journey of living a life that is worthwhile, clients acquire new behavioural, cognitive, emotional, and spiritual skills through DBT group therapy within a supportive environment, fostering a collective journey toward healing. The skills training program encompasses weekly sessions lasting 2-2½ hours. The program is dedicated half the time to introducing novel skills and the rest to reviewing homework practices associated with the current skill set. These well-structured group sessions follow the agenda outlined in Linehan's DBT manual (Lew et al., 2006; Linehan, 2014). The group therapy would be closed and thus a homogenous group. The group size would be a maximum of 10 people. Material in skills training in group settings should be presented at a pace adapted to clients' level of understanding and emotional capability.

In the context of SAD treatment, group DBT therapy aims to be advantageous as therapists can observe and address interpersonal behaviours and thoughts that may hinder skillful management of challenging situations when individuals with SAD interact with others. Such behaviours might not manifest as clearly in individual therapy sessions (Linehan, 2014). Additionally, group settings provide clients with opportunities to interact with peers facing similar challenges, fostering validation and the development of a supportive community—a therapeutic advantage (Malhotra & Baker, 2023) for those with SAD. The experience of spending time with individuals sharing similar symptoms contributes to a sense of normalization and connection (Paulus et al., 2015). Group members can also learn from each other and serve as mutual sources of inspiration. Furthermore, group DBT offers a relatively non-threatening

environment for individuals with SAD to do skills homework, learn, and practice being in a group setting (Linehan, 2014).

Coaching

Phone coaching involves providing clients with having the option to connect with therapists via phone, allowing them to seek assistance in applying skills precisely when needed. This on-call feature is an integral component of DBT treatment, supporting individuals in the real-time application of behavioural, cognitive, and emotional skills to address daily life challenges as they arise (Lew et al., 2006). Moreover, phone coaching serves the dual purpose of helping therapists identify any deficits that may surface only in real-world applications of the skills. The consultations aid clients in implementing skills at the exact moment they are required. Engaging with clients in their natural environments, particularly when facing difficulties, offers a valuable opportunity to assess and address challenges effectively (Swales & Dunkley, 2020).

Consultation Team

Consultation teams play a crucial role in providing continuous training to enhance the skill level of treatment providers. Such teams ensures that therapists adhere to the therapeutic framework and effectively address challenges that arise during treatment delivery (Lew et al., 2006). Supported by a growing body of empirical literature, it is evident that the DBT consultation team significantly contributes to improving motivation, emotion regulation, and adherence to the DBT model (Noll et al., 2020; Walsh et al., 2018). Consultation teams may choose to begin sessions with brief DBT mindfulness activities, incorporate an observer to monitor team dynamics, rank agenda items for priority, and rotate team roles, promoting a dialectical balance. This instrumental resource assists therapists in applying DBT skills for self-

regulation, preventing burnout, and sustaining a high level of care and support for their clients (Noll et al., 2020).

Important Components in DBT

What are Diary Cards and How to Apply These?

The diary card serves as a daily log for clients to monitor their emotions, behaviours, and the therapeutic skills they apply. It plays a crucial role in keeping them attentive and aligned with their treatment objectives. This straightforward yet powerful tool enables clients to recognize patterns and triggers impacting their emotions and behaviours in their daily life. Therapists review the diary card weekly during every session (McMain et al., 2001).

What is Behavioural Chain Analysis and How to Apply It?

Chain Analysis is employed when unhealthy behaviours are observed. It involves analysing the sequence of events leading to these behaviours along with assessing the consequences that might block the process of change (Rizvi & Ritschel, 2014). It also involves determining strategies for repairing the linked cost. In this process, therapists invite clients to articulate problematic behaviours, and thoroughly explore the triggering event and contributing factors that led to vulnerability (Koerner, 2013). Clients go into thorough details, disentangling the chain of events leading to these behaviours and subsequently outlining the resulting consequences. Moving forward, clients elaborate on the consequences that result from these behaviours. To initiate change, clients brainstorm and articulate healthy alternatives, which might help them effectively replace problematic links in the chain of events. Subsequently, in collaboration with therapists, clients craft preventative healthy strategies to reduce vulnerability to stressors. Finally, clients integrate these action plans into their lives to practice healthy

behaviours and to resolve or ease significant consequences stemming from the initial problem behaviours (Linehan, 2014; Rizvi & Ritschel, 2014).

What is Missing-Links Analysis and How to Apply It

This method supports clients struggling with behaviour change through a missing-links analysis. It helps them pinpoint obstacles hindering task completion and desired behaviours. Self-reflection involves key questions. First, clients assess awareness of necessary behaviours; if lacking, obstacles are identified. Problem-solving follows, planning ways to enhance awareness. The second question evaluates willingness, exploring potential blocks like inadequacy. Interventions, such as radical acceptance, come into play. The third question gauges consideration of the necessary action, using reminders for improvement. The fourth question delves into obstacles to immediate action, employing strategies like reward planning. This structured approach aims to dissect, understand, and proactively address barriers to effective behaviours (Linehan, 2014).

Experiential Component: DBT Exercises for Social Anxiety

There are four core skills, which form the heart of this transformative approach, clients aspire to acquire: Mindfulness, Distress Tolerance, Emotion Regulation, and Interpersonal Effectiveness. The essence of DBT lies in its dual commitment to acceptance and change. Mindfulness and Distress Tolerance embody the acceptance aspect, fostering a profound understanding of the present moment and the ability to tolerate distress. On the flip side, Emotion Regulation and Interpersonal Effectiveness constitute the change component, offering tools to manage emotions effectively and navigate interpersonal relationships skillfully (Linehan, 2014; Linehan & Wilks, 2015). This holistic approach encapsulates the DBT journey, inviting clients to embrace acceptance and embark on a transformative path of change.

The structured core DBT skills training, designed for both individual and group therapy, progresses in a sequential manner. Beginning with a comprehensive Orientation and Mindfulness module spanning 2 weeks, clients delve into foundational practices such as the goals of the skills training, guidelines for skills training, and skills training assumptions. Specifically, in the mindfulness skills they learn core mindfulness skills. The subsequent 5 weeks are dedicated to the Interpersonal Effectiveness module, fostering crucial skills for meaningful connections and "walking the middle path". A revisited Orientation and Mindfulness module for 2 weeks reinforces foundational practices, preparing the way for the Emotion Regulation module, a 7-week journey into understanding, naming, managing, and changing emotional responses and reducing emotional vulnerability to emotional mind. A renewed focus on Orientation and Mindfulness for 2 weeks precedes the final module, Distress Tolerance, which unfolds over 6 weeks to topics of reality acceptance, self-soothing, and crises management. This carefully designed sequence culminates in a 24-week, 6-month program, drawing inspiration from Linehan's work. In the following section there will be examples of exercises for each of the core skills. At the end of each section there will be a discussion point, where the clients will be invited to discuss the goals of the exercises, their goals, and their experiences.

Mindfulness

Mindfulness skills foster awareness of the present moment during social interactions by aiding clients in observing their internal thoughts, sensations, and external surroundings without judgment. This practice encourages clients to notice bodily sensations and emotions without becoming overwhelmed. Core mindfulness skills encompass "how" and "what" skills. Specifically, "what" skills involve observing, describing, and participating in mindfulness, while "how" skills teach non-judgmental, balanced, and effective practices (McKay et al., 2019).

An integral aspect of mindfulness is the development of wise mind skills, representing an inner wisdom within each person. Wise mind encourages walking a middle path, finding balance between the reasonable mind and emotional mind (Linehan, 2015), which might be essential for clients with social anxiety to navigate social complexities. However, these states, the reasonable mind and emotional mind, when considered independently, may lead to challenges to achieving the wise mind state (Linehan, 2015; Samaratunge, 2015). Reasonable mind tends to prioritize logical planning and evaluation, lacking a balance with emotions and values. On the other hand, emotional mind signifies a state where emotions take superiority and control thoughts and behaviours, lacking a balanced rationale (Linehan, 2015). Mindfulness aims to guide clients in observing and experiencing reality as it is, promoting effective living in the moment without judgement, providing those with social anxiety a valuable toolkit for navigating social interactions with greater awareness, balance, acceptance, and overall well-being (McKay et al., 2019).

Mindfulness: Ideas for Practicing Nonjudgement. The following exercise is adapted and inspired from *DBT Skills Training Handouts and Worksheets* (Linehan, 2014).

This exercise is called Ideas for practicing nonjudgements. It intends to help client leave out criticism, judgements, and assumptions. “I invite you to attend to your breath for a few minutes. Find a comfortable position and breathe naturally. Shift your attention to your centre, near your gut. Without changing your breath, let your awareness gently expand to the space around you. Keep your primary focus at your centre and allow your awareness to broaden without changing your gaze. Now, begin by imagining specific instances where social anxiety triggered self-blame. Recreate the emotional state associated with these moments. Practice observing judgemental thoughts and statements, saying in your mind, “A judgemental thought

arose in my mind." Now, count judgemental thoughts and statements by moving objects or pieces of paper from one pocket to another, by clicking a sports counter, or by marking a piece of paper. Then, replace judgemental thoughts and statements with nonjudgemental thoughts and statements."

Tips for replacing judgement include by stating the facts:

1. Describe the facts of the event or situation—only what is observed with your senses.
2. Describe the consequences of the event. Keep to the facts.
3. Describe your own feelings in response to the facts (remember, emotions are not judgements).
4. Observe your judgemental facial expressions, postures, and voice tones (including voice tones in your head).
5. Change judgemental expressions, postures, and voice tones.
6. Tell someone what you did today nonjudgementally, or about an event that occurred. Stay very concrete; only relate what you observed directly.
7. Write out a nonjudgemental description of an event that prompted an emotion.
8. Write out a nonjudgemental blow-by-blow account of a particularly important episode in your day. Describe both what happened in your environment and what your thoughts, feelings, and actions were. Leave out any analysis of why something happened, or why you thought, felt, or acted as you did. Stick to the facts that you observed.
9. Strengthen this practice by sharing nonjudgemental accounts of your day with someone or writing out nonjudgemental descriptions of events that prompted emotions.

Distress Tolerance

Distress Tolerance aims to foster adaptability and healthier survival skills, enabling clients to navigate challenging situations effectively. Developing distress tolerance skills and engaging in related activities can support clients in more effectively managing both past and present distressing situations. This process involves building resilience and providing new approaches to navigate and moderate distressing situations (Linehan, 2014).

Distress Tolerance: Safe Space Visualization. The following exercise is adapted and inspired from *The Dialectical Behaviour Therapy Skills Workbook: Practical DBT Exercises for Learning Mindfulness, Interpersonal Effectiveness, Emotion Regulation, and Distress Tolerance* (McKay, Wood & Brantley, 2019).

The following exercise is called Safe Space Visualization Using 5 senses. This exercise is designed to teach the client how to stay in their window of tolerance. It facilitates relaxation in both physiological and psychological states by guiding clients to imagine a peaceful and safe space, involving all five senses—smell, sight, hearing, and touch.

"To begin, sit in a comfortable chair with your feet and hands resting comfortably. Close your eyes. Take a slow, long breath in through your nose. Imagine your safe space. Picture the soothing sounds around you—rustling leaves, ocean waves, whatever brings calm. Inhale deeply, taking in the comforting scent—fresh air, a fireplace, or blooming flowers. Now, feel the environment: the ground beneath you, the gentle touch of wind or sun. Imagine savouring a delightful taste, something that brings joy. Explore your safe place with all your senses, embracing the calm it provides. Remember, you can return here whenever life feels overwhelming. Take a final mental glimpse, then, slowly open your eyes, bringing the serenity of your safe space into the present moment."

Emotion Regulation

Emotion regulation skills empower clients to better manage and control their emotions. This module focuses on understanding and labelling emotions, allowing clients to identify and comprehend their emotional experiences. Additionally, clients learn techniques to modify their emotional responses in challenging social situations, which eventually decrease the intensity of distressing emotions. The module also addresses building emotional resilience to minimize vulnerability to extreme emotional reactions. Ultimately, it guides clients in the management and acceptance of challenging emotions (Linehan et al., 2015).

Letting Go of Emotional Suffering. The following exercise is adapted and inspired from *DBT Skills Training Handouts and Worksheets* (Linehan, 2014).

This exercise is designed to guide clients in observing and managing distressing emotions, encouraging acceptance and acknowledgment of their emotions without self-judgement while fostering a willingness to navigate anxiety triggering social situations mindfully and skillfully. This exercise integrates emotion regulation skills with mindfulness exercises through a compassionate lens. I invite clients to observe their stressing emotions such as anxiety and shame. “Take a moment to step back and observe your emotions. Now allow yourself to visualize your emotions as a wave, acknowledging that it comes and goes. Imagine yourself surfing on this wave of emotions without resisting or amplifying it. Make sure to kindly avoid blocking or suppressing the emotion; let it flow naturally. It is natural to want to push away emotions. Don’t try to get rid of or push away the emotion. Don’t try to keep the emotion around. Don’t hold on to it. I invite you to be mindful of your body sensations in social situations. Now gently locate the sensations in your body related to distressing emotions. Allow yourself to fully experience these sensations without judgement. Notice how long it takes for the heightened emotion to naturally subside. Remembering your identity beyond social anxiety and

that you are not your emotion. Understand that you are not defined by your social anxiety; it's just one aspect. Recall times when you felt differently, reminding yourself of the fluid nature of emotions. Let’s practice compassion towards your distressing emotions. Your emotions deserve respect. Treat your emotions with respect, acknowledging their presence without judgement. Avoid harsh self-judgement related to social anxiety. Practice being willing to experience and navigate social anxiety. Embrace a mindset of radical acceptance, acknowledging and accepting your emotions without resistance.”

Interpersonal Skills

Interpersonal skills assist clients in cultivating and maintaining healthy relationships with both themselves and others, while effectively navigating and mitigating unhealthy ones. This module focuses on teaching core interpersonal skills, including setting healthy boundaries, conflict resolution, assertiveness to fulfill personal needs, and the ability to decline unwanted requests from others. By acquiring these skills, clients can establish self-respect and obtain respect from others. The goal of interpersonal skills is to guide clients in finding a balanced approach by harmonizing acceptance and change within themselves and their relationships (Egolf & Gold, 2023; McKay et al., 2019; Rathus & Miller, 2014).

Guidelines for Self-Respect Effectiveness: Keeping Respect for Yourself (FAST). The following exercise is adapted and inspired from *DBT Skills Training Handouts and Worksheets* (Linehan, 2014).

In this practice, an acronym is utilized to facilitate easy recall of essential skills. The 'F' underscores the importance of fairness, 'A' emphasizes steering clear of unnecessary apologies, 'S' signifies adhering to personal values, and 'T' stresses the significance of truthfulness. The goal here is to instill in clients a heightened awareness of their values and the cultivation of self-

respect within interpersonal dynamics. This exercise aids in navigating various social situations while simultaneously enhancing skills in interpersonal effectiveness and fostering a positive self-image. In this part of our session, we're diving into role-play, a powerful tool for therapeutic exploration and implementation. I ask clients to revisit a moment that, while not overly triggering, still stirred up some social anxiety, breaking it down step by step. We disentangle the functions served by those anxious feelings and pinpoint the triggers that set them off. Together, we examine the strategies they used in that situation. Subsequently, I guide them through a re-enactment of the situation, this time armed with the FAST skills—being Fair, not Apologizing excessively, Sticking to values, and being Truthful. As we wrap up, we reflect on how the dynamics shift when these skills are brought into the interpersonal mix.

FAST skills as follows:

- Be fair to yourself and others when expressing your needs or concerns in social interactions. Validate your own feelings and desires while acknowledging those of the other person.
- Refrain from unnecessary apologies. Resist over apologizing, especially for simply existing or making reasonable requests. Avoid apologizing for having an opinion or expressing disagreement. Maintain confident body language to avoid conveying shame or insecurity. Steer clear of invalidating your thoughts and feelings.
- Stick to your values. Uphold your personal values and integrity. Avoid compromising your beliefs for trivial reasons. Clearly understand your moral and valued principles and stay true to them.
- Be truthful about your feelings. Practice honesty in your communication.

Recommended Readings

Recommended readings and resources, provided at the end of the workshop, include select books focusing on gaining skills to enhance overall well-being and alleviate symptoms of SAD through a holistic, trauma-informed, and DBT approach (see Appendix A).

Summary and Conclusions

In conclusion, this capstone illuminates the intricate connections between social anxiety, trauma, body awareness, and alexithymia, showing their interplay in shaping and intensifying SAD. Research underscores a heightened susceptibility to SAD and disturbed body awareness among individuals who have faced interpersonal social threats. SAD, manifested as a spectrum of responses, involves coping strategies that induce hyperarousal or hypoarousal states, contributing to a unique interplay between emotional experiences and bodily reactions. Trauma further complicates this dynamic, impacting the amygdala, prefrontal cortex, and autonomic nervous system. The concept of "the body keeps the score" emphasizes the storage of trauma in both mind and body, disrupting bodily awareness and emotional regulation. Exploring the connections among social anxiety, alexithymia, and trauma reveals a bidirectional correlation, emphasizing the pivotal role of body awareness deficits. It is likely that the trauma intricately shapes and exacerbates social anxiety, body awareness, and alexithymia, underlining the interconnected nature of emotional and bodily experiences. Dialectical Behaviour Therapy (DBT) emerges as a versatile intervention, extending beyond its original scope to effectively address anxiety-related symptoms in social anxiety. By incorporating mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness, DBT equips individuals to comprehensively navigate the multifaceted challenges of social anxiety. In essence, this capstone calls for a deeper understanding of the complex dynamics at play, recognizing the need for

holistic research to inform targeted interventions. Through this exploration, this project paves the way for enhanced mental health practices, fostering a community of empathy, resilience, and profound understanding.

References

AbuHasan, Q., Reddy, V., & Siddiqui, W. (2023). Neuroanatomy, amygdala. In *StatPearls*. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK537102/

Accardo, M. S. (2020). *DBT interpersonal effectiveness skills as social anxiety intervention in college students*. Hofstra University.

Acquah, E. O., Topalli, P.-Z., Wilson, M. L., Junttila, N., & Niemi, P. M. (2016). Adolescent loneliness and social anxiety as predictors of bullying victimisation. *International Journal of Adolescence and Youth*, *21*(3), 320–331. https://doi.org/10.1080/02673843.2015.1083449

Afshari, B., & Hasani, J. (2020). Study of dialectical behavior therapy versus cognitive behavior therapy on emotion regulation and mindfulness in patients with generalized anxiety disorder. *Journal of Contemporary Psychotherapy*, *50*(4), 305–312. https://doi.org/10.1007/s10879-020-09461-9

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, *30*(2), 217–237. https://doi.org/10.1016/j.cpr.2009.11.004

Alexandra Kredlow, M., Fenster, R. J., Laurent, E. S., Ressler, K. J., & Phelps, E. A. (2022). Prefrontal cortex, amygdala, and threat processing: Implications for PTSD. *Neuropsychopharmacology*, *47*(1), 247-259. https://doi.org/10.1038/s41386-021-01155-7

Alomari, N. A., Bedaiwi, S. K., Ghasib, A. M., Kabbarah, A. J., Alnefaie, S. A., Hariri, N., Altammar, M. A., Fadhel, A. M., & Altowairqi, F. M. (2022). Social Anxiety Disorder: Associated conditions and therapeutic approaches. *Cureus*, *14*(12), e32687. https://doi.org/10.7759/cureus.32687

American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

Anand, K. S., & Dhikav, V. (2012). Hippocampus in health and disease: An overview. *Annals of Indian Academy of Neurology*, *15*(4), 239–246. https://doi.org/10.4103/0972-2327.104323

Anderson, E. R., & Hope, D. A. (2009). The relationship among social phobia, objective and perceived physiological reactivity, and anxiety sensitivity in an adolescent population. *Journal of Anxiety Disorders*, *23*(1), 18–26. https://doi.org/10.1016/j.janxdis.2008.03.011

Arnsten, A. F., Raskind, M. A., Taylor, F. B., & Connor, D. F. (2015). The effects of stress exposure on prefrontal cortex: Translating basic research into successful treatments for post-traumatic stress disorder. *Neurobiology of Stress*, *1*, 89–99. https://doi.org/10.1016/j.ynstr.2014.10.002

Asher, M., Hofmann, S. G., & Aderka, I. M. (2021). I'm not feeling it: Momentary experiential avoidance and social anxiety among individuals with social anxiety disorder. *Behavior Therapy*, *52*(1), 183–194. https://doi.org/10.1016/j.beth.2020.04.001

Asnaani, A., & Hofmann, S. G. (2012). Collaboration in culturally responsive therapy: Establishing a strong therapeutic alliance across cultural lines. *Journal of Clinical Psychology*, *68*(2), 187–197. https://doi.org/10.1002/jclp.21829

Aust, S., Härtwig, E. A., Heuser, I., & Bajbouj, M. (2013). The role of early emotional neglect in alexithymia. *Psychological trauma: theory, research, practice, and policy*, *5*, 225–232. https://doi.org/10.1037/a0027314

Baer, R. A. (2015). *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications*. Elsevier.

Bedard-Gilligan, M., & Zoellner, L. A. (2012). Dissociation and memory fragmentation in posttraumatic stress disorder: An evaluation of the dissociative encoding hypothesis. *Memory (Hove, England)*, *20*(3), 277–299. https://doi.org/10.1080/09658211.2012.655747

Benau, E. M., Wiatrowski, R., & Timko, C. A. (2020). Difficulties in emotion regulation, alexithymia, and social phobia are associated with disordered eating in male and female undergraduate athletes. *Frontiers in Psychology*, *11*, 1646. https://doi.org/10.3389/fpsyg.2020.01646

Berenbaum, H., & James, T. (1994). Correlates and retrospectively reported antecedents of alexithymia. *Psychosomatic Medicine*, *56*(4), 353–359. https://doi.org/10.1097/00006842-199407000-00011

Berman, Z., Assaf, Y., Tarrasch, R., & Joel, D. (2018). Assault-related self-blame and its association with PTSD in sexually assaulted women: An MRI inquiry. *Social Cognitive and Affective Neuroscience*, *13*(7), 775–784. https://doi.org/10.1093/scan/nsy044

Bernard, H., Burlingame, G., Flores, P., Greene, L., Joyce, A., Kobos, J. C., …& Feirman, D. (2008). Clinical practice guidelines for group psychotherapy. *International Journal Of Group Psychotherapy*, *58*(4), 455–542. https://doi.org/10.1521/ijgp.2008.58.4.455

Beutler, S., Mertens, Y. L., Ladner, L., Schellong, J., Croy, I., & Daniels, J. K. (2022). Trauma-related dissociation and the autonomic nervous system: A systematic literature review of psychophysiological correlates of dissociative experiencing in PTSD patients. *European Journal of Psychotraumatology*, *13*(2), 2132599. https://doi.org/10.1080/20008066.2022.2132599

Bilotta, E., Giacomantonio, M., Leone, L., Mancini, F., & Coriale, G. (2016). Being alexithymic: Necessity or convenience. Negative emotionality × avoidant coping interactions and alexithymia. *Psychology and Psychotherapy: Theory, Research and Practice*, *89*(3), 261–275. https://doi.org/10.1111/papt.12079

Bjornsson, A. S., Hardarson, J. P., Valdimarsdottir, A. G., Gudmundsdottir, K., Tryggvadottir, A., Thorarinsdottir, K., Wessman, I., Sigurjonsdottir, Ó., Davidsdottir, S., & Thorisdottir, A. S. (2020). Social trauma and its association with posttraumatic stress disorder and social anxiety disorder. *Journal Of Anxiety Disorders*, *72*, 102228. https://doi.org/10.1016/j.janxdis.2020.102228

Bottari, S. A., Lamb, D. G., Murphy, A. J., Porges, E. C., Rieke, J. D., Harciarek, M., Datta, S., & Williamson, J. B. (2021). Hyperarousal symptoms and decreased right hemispheric frontolimbic white matter integrity predict poorer sleep quality in combat-exposed veterans. *Brain Injury*, *35*(8), 922–933. https://doi.org/10.1080/02699052.2021.1927186

Boyer, S. M., Caplan, J. E., & Edwards, L. K. (2022). Trauma-related dissociation and the dissociative disorders: *Delaware Journal of Public Health*, *8*(2), 78–84. https://doi.org/10.32481/djph.2022.05.010

Bradizza, C. M., Stasiewicz, P. R., & Paas, N. D. (2006). Relapse to alcohol and drug use among individuals diagnosed with co-occurring mental health and substance use disorders: A review. *Clinical Psychology Review*, *26*(2), 162–178. https://doi.org/10.1016/j.cpr.2005.11.005

Breslau, N. (2001). The epidemiology of posttraumatic stress disorder: What is the extent of the problem? *The Journal of Clinical Psychiatry*, *62*, 16–22.

Brewin, C. R., & Burgess, N. (2014). Contextualisation in the revised dual representation theory of PTSD: A response to Pearson and colleagues. *Journal of Behavior Therapy and Experimental Psychiatry*, *45*(1), 217–219. https://doi.org/10.1016/j.jbtep.2013.07.011

Brown, W. J., Bruce, S. E., Buchholz, K. R., Artime, T. M., Hu, E., & Sheline, Y. I. (2016). Affective dispositions and ptsd symptom clusters in female interpersonal trauma survivors. *Journal Of Interpersonal Violence*, *31*(3), 407–424. https://doi.org/10.1177/0886260514555866

Brühl, A., Kley, H., Grocholewski, A., Neuner, F., & Heinrichs, N. (2019). Child maltreatment, peer victimization, and social anxiety in adulthood: A cross-sectional study in a treatment-seeking sample. *BMC Psychiatry*, *19*, 418. https://doi.org/10.1186/s12888-019-2400-4

Bruijnen, C. J., Young, S. Y., Marx, M., & Seedat, S. (2019a). Social anxiety disorder and childhood trauma in the context of anxiety (behavioural inhibition), impulsivity (behavioural activation) and quality of life. *South African Journal of Psychiatry*, *25*.

Bruijnen, C. J., Young, S. Y., Marx, M., & Seedat, S. (2019b). Social anxiety disorder and childhood trauma in the context of anxiety (behavioural inhibition), impulsivity (behavioural activation) and quality of life. *South African Journal of Psychiatry*, *25*, 1–7. https://doi.org/10.4102/sajpsychiatry.v25i0.1189

Buckner, J. D., DeWall, C. N., Schmidt, N. B., & Maner, J. K. (2010). A tale of two threats: Social anxiety and attention to social threat as a function of social exclusion and non-exclusion threats. *Cognitive Therapy And Research*, *34*(5), 449–455. https://doi.org/10.1007/s10608-009-9254-x

Butler, A. S., Panzer, A. M., & Goldfrank, L. R. (2003). Understanding the psychological consequences of traumatic events, disasters, and terrorism. *Preparing for the psychological consequences of terrorism: A public health strategy*. National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK221638/

Cacioppo, J. T., & Cacioppo, S. (2018). Loneliness in the modern age: An evolutionary theory of loneliness (ETL). In *Advances in experimental social psychology* (Vol. 58, pp. 127–197). Elsevier Academic Press.

Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Effects of suppression and acceptance on emotional responses of individuals with anxiety and mood disorders. *Behaviour Research And Therapy*, *44*(9), 1251–1263. https://doi.org/10.1016/j.brat.2005.10.001

Cavalera, C., Andreani, P., Baumgartner, O., & Oasi, O. (2022). Do Immature Defense Mechanisms Mediate the Relationship Between Shame, Guilt, and Psychopathological Symptoms? *Frontiers in Psychology*, *13*. https://www.frontiersin.org/articles/10.3389/fpsyg.2022.832237

Cavalera, C., Pepe, A., Zurloni, V., Diana, B., Realdon, O., Todisco, P., Castelnuovo, G., Molinari, E., & Pagnini, F. (2018). Negative social emotions and cognition: Shame, guilt and working memory impairments. *Acta psychologica*, *188*, 9–15. https://doi.org/10.1016/j.actpsy.2018.05.005

Cechak, P. (2021). Borderline personality disorder: A review and analysis through the lens of the unified theory. *Dissertations, 2020-Current*. https://commons.lib.jmu.edu/diss202029/44

Center for Substance Abuse Treatment. (1999). Chapter 1—Introduction to Brief Interventions and Therapies. In *Brief Interventions and Brief Therapies for Substance Abuse*. Substance

Abuse and Mental Health Services Administration (US). https://www.ncbi.nlm.nih.gov/books/NBK64950/

Center for Substance Abuse Treatment (US). (2014). *Trauma-Informed Care in Behavioral Health Services*. Substance Abuse and Mental Health Services Administration (US). http://www.ncbi.nlm.nih.gov/books/NBK207201/

Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review*, *29*(6), 560–572. https://doi.org/10.1016/j.cpr.2009.06.005

Chapman, A. L. (2006). Dialectical behavior therapy: Current indications and unique elements *Psychiatry (Edgmont)*, *3*(9), 62–68.

Chapman, A. L. (2019). Borderline personality disorder and emotion dysregulation. *Development and Psychopathology*, *31*(3), 1143–1156. https://doi.org/10.1017/S0954579419000658

Chivers-Wilson, K. A. (2006). Sexual assault and posttraumatic stress disorder: A review of the biological, psychological and sociological factors and treatments. *McGill Journal of Medicine: MJM*, *9*(2), 111–118.

Chopra, K. K. (2013). *Exploring the pathophysiology of chronic depression: the interplay between depression, cortisol responses, and personality*. University of Toronto (Canada) 186.

Chu, B., Marwaha, K., Sanvictores, T., & Ayers, D. (2023). Physiology, Stress Reaction. StatPearls .Publishing. http://www.ncbi.nlm.nih.gov/books/NBK541120/

Chung, M. C., Di, X., & Wan, K. H. (2016). Past trauma, alexithymia, and posttraumatic stress among perpetrators of violent crime. *Traumatology*, *22*, 104–112. https://doi.org/10.1037/trm0000066

Clayton, K. (2004). The interrelatedness of disconnection: The relationship between dissociative tendencies and alexithymia. *Journal Of Trauma & Dissociation*, *5*(1), 77–101. https://doi.org/10.1300/J229v05n01_05

Collins, K. A., Westra, H. A., Dozois, D. J. A., & Burns, D. D. (2004). Gaps in accessing treatment for anxiety and depression: Challenges for the delivery of care. *Clinical Psychology Review*, *24*(5), 583–616. https://doi.org/10.1016/j.cpr.2004.06.001

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R., Hubbard, R., Kagan, R., Liautaud, J., Mallah, K., Olafson, E., & van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, *35*(5), 390–398. https://doi.org/10.3928/00485713-20050501-05

Cook, M. A., & Newins, A. R. (2021). Social anxiety and dissociation: The moderating role of emotion regulation. *Motivation and Emotion*, *45*(3), 345–353. https://doi.org/10.1007/s11031-021-09875-5

Corrigan, F. M., Fisher, J.J., & Nutt, D. J. (2011). Autonomic dysregulation and the window of tolerance model of the effects of complex emotional trauma. *Journal of Psychopharmacology*, *25*(1), 17–25. https://doi.org/10.1177/0269881109354930

Courtois, C. A., & Ford, J. D. (Eds.). (2009). *Treating complex traumatic stress disorders: An evidence-based guide* (pp. 82, 468). New York: The Guilford Press.

Craparo, G., Schimmenti, A., & Caretti, V. (2013). Traumatic experiences in childhood and psychopathy: A study on a sample of violent offenders from Italy. *European journal of psychotraumatology*, *4*, 10.3402/ejpt.v4i0.21471. https://doi.org/10.3402/ejpt.v4i0.21471

Crawford, A. (2010a). If 'the body keeps the score': Mapping the dissociated body in trauma narrative, intervention, and theory. *University of Toronto Quarterly*, *79*(2), 702–719. https://doi.org/10.3138/utq.79.2.702

Crowell, S. E., Beauchaine, T. P., Lenzenweger, M. F., Beauchaine, T., & Hinshaw, S. (2008). The development of borderline personality disorder and self-injurious behavior. *Child And Adolescent Psychopathology* (pp. 510–539). John Wiley & Sons, Inc.

Crowell, S. E., Beauchaine, T. P., & Linehan, M. M. (2009). A biosocial developmental model of borderline personality: Elaborating and extending Linehan's theory. *Psychological Bulletin*, *135*(3), 495–510. https://doi.org/10.1037/a0015616

Crozier, W. R., & Alden, L. E. (2005). *The essential handbook of social anxiety for clinicians*. John Wiley & Sons.

Cuijpers, P., Auerbach, R. P., Benjet, C., Bruffaerts, R., Ebert, D., Karyotaki, E., & Kessler, R. C. (2019). The world health organization world mental health international college student initiative: An overview. *International Journal of Methods in Psychiatric Research*, *28*(2), e1761. https://doi.org/10.1002/mpr.1761

Dalbudak, E., Evren, C., Aldemir, S., Coskun, K. S., Yıldırım, F. G., & Ugurlu, H. (2013). Alexithymia and personality in relation to social anxiety among university students. *Psychiatry Research*, *209*(2), 167–172. https://doi.org/10.1016/j.psychres.2012.11.027

Daros, A. R., Daniel, K. E., Meyer, M. J., Chow, P. I., Barnes, L. E., & Teachman, B. A. (2019). Impact of social anxiety and social context on college students' emotion regulation

strategy use: An experience sampling study. *Motivation And Emotion*, *43*, 844–855. https://doi.org/10.1007/s11031-019-09773-x

De Bellis, M. D., & Zisk, A. (2014). "The biological effects of childhood trauma." *Child and Adolescent Psychiatric Clinics of North America*, *23*(2), 185–222. https://doi.org/10.1016/j.chc.2014.01.002

DeSerisy, M., Hirsh, E., & Macklin, J. (2023). Adapting DBT for Youth with Learning Disorders. In *Learning Disorders Across the Lifespan: A Mental Health Framework* (pp. 109–142). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-21772-2_9

Domschke, K., Stevens, S., Pfleiderer, B., & Gerlach, A. L. (2010). Interoceptive sensitivity in anxiety and anxiety disorders: An overview and integration of neurobiological findings. *Clinical Psychology Review*, *30*(1), 1–11. https://doi.org/10.1016/j.cpr.2009.08.008

Dunlavey, C. J. (2018). Introduction to the hypothalamic-pituitary-adrenal axis: Healthy and dysregulated stress responses, developmental stress and neurodegeneration. *Journal of Undergraduate Neuroscience Education*, *16*(2), R59–R60.

Duval, S., & Wicklund, R. A. (1972). A theory of objective self awareness (pp. x, 238). Academic Press.

Dvir, Y., Ford, J. D., Hill, M., & Frazier, J. A. (2014). Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review Of Psychiatry*, *22*(3), 149–161. https://doi.org/10.1097/HRP.0000000000000014

Edwards, E. R., Kober, H., Rinne, G. R., Griffin, S. A, Axelrod, S., & Cooney, E. B. (2021). Skills-homework completion and phone coaching as predictors of therapeutic change and

outcomes in completers of a DBT intensive outpatient programme. *Psychology and Psychotherapy: Theory, Research and Practice*, *94*. https://doi.org/10.1111/papt.12325

Egolf, A., & Gold, A. L. (2023). Interpersonal effectiveness in action: The therapeutic milieu for DBT assertiveness skills practice. *The Brown University Child and Adolescent Behavior Letter*, *39*(3), 1–4. https://doi.org/10.1002/cbl.30693

Eichhorn, S., Brähler, E., Franz, M., Friedrich, M., & Glaesmer, H. (2014). Traumatic experiences, alexithymia, and posttraumatic symptomatology: A cross-sectional population-based study in Germany. *European Journal of Psychotraumatology*, *5*, 10.3402/ejpt.v5.23870. https://doi.org/10.3402/ejpt.v5.23870

Elzinga, B. M., Spinhoven, P., Berretty, E., de Jong, P., & Roelofs, K. (2010). The role of childhood abuse in HPA-axis reactivity in Social Anxiety Disorder: A pilot study. *Biological Psychology*, *83*(1), 1–6. https://doi.org/10.1016/j.biopsycho.2009.09.006

Etkin, A., Egner, T., & Kalisch, R. (2011). Emotional processing in anterior cingulate and medial prefrontal cortex. *Trends in Cognitive Sciences*, *15*(2), 85–93. https://doi.org/10.1016/j.tics.2010.11.004

Fang, S., Chung, M. C., & Wang, Y. (2020). The impact of past trauma on psychological distress: The roles of defense mechanisms and alexithymia. *Frontiers in Psychology*, *11*. https://www.frontiersin.org/articles/10.3389/fpsyg.2020.00992

Farina, B., & Imperatori, C. (2023). Are traumatic disintegration, detachment, and dissociation separate pathogenic processes related to attachment trauma? A working hypothesis for clinicians and researchers. *Psychopathology*, 1–12. https://doi.org/10.1159/000535191

Fassbinder, E., Schweiger, U., Martius, D., Brand-de Wilde, O., & Arntz, A. (2016). Emotion regulation in schema therapy and dialectical behavior therapy. *Frontiers in Psychology*, *7*. https://www.frontiersin.org/article/10.3389/fpsyg.2016.01373

Fasulo, S. J., Ball, J. M., Jurkovic, G. J., & Miller, A. L. (2015). Towards the development of an effective working alliance: The application of DBT validation and stylistic strategies in the adaptation of a manualized complex trauma group treatment program for adolescents in long-term detention. *American Journal of Psychotherapy*, *69*(2), 219–239. https://doi.org/10.1176/appi.psychotherapy.2015.69.2.219

Ferentzi, E., Köteles, F., Csala, B., Drew, R., Tihanyi, B. T., Pulay-Kottlár, G., & Doering, B. K. (2017). What makes sense in our body? Personality and sensory correlates of body awareness and somatosensory amplification. *Personality and Individual Differences*, *104*, 75–81. https://doi.org/10.1016/j.paid.2016.07.034

Flett, R., Kazantzis, N., Long, N., Macdonald, C., & Millar, M. (2004). Gender and ethnicity differences in the prevalence of traumatic events: Evidence from a New Zealand community sample. *Stress and Health*, *20*, 149–157. https://doi.org/10.1002/smi.1014

Franzoni, E., Gualandi, S., Caretti, V., Schimmenti, A., Di Pietro, E., Pellegrini, G., Craparo, G., Franchi, A., Verrotti, A., & Pellicciari, A. (2013). The relationship between alexithymia, shame, trauma, and body image disorders: Investigation over a large clinical sample. *Neuropsychiatric Disease and Treatment*, *9*, 185–193. https://doi.org/10.2147/NDT.S34822

Friedman, N. P., & Robbins, T. W. (2022). The role of prefrontal cortex in cognitive control and executive function. *Neuropsychopharmacology*, *47*(1), Article 1. https://doi.org/10.1038/s41386-021-01132-0

Garfinkel, S. N., & Critchley, H. D. (2013). Interoception, emotion and brain: New insights link internal physiology to social behaviour. Commentary on: “Anterior insular cortex mediates bodily sensibility and social anxiety” by Terasawa et al. (2012). *Social Cognitive and Affective Neuroscience*, *8*(3), 231–234. https://doi.org/10.1093/scan/nss140

Gentsch, A., & Kuehn, E. (2022). Clinical manifestations of body memories: The impact of past bodily experiences on mental health. *Brain Sciences*, *12*(5), 594. https://doi.org/10.3390/brainsci12050594

Gilboa-Schechtman, E., Shachar, I., & Helpman, L. (2014). Evolutionary perspective on social anxiety. In *Social anxiety: Clinical, developmental, and social perspectives, 3rd ed* (pp. 599–622). Elsevier Academic Press. https://doi.org/10.1016/B978-0-12-394427-6.00021-2

Glick, D. M, & Orsillo, S. M. (2011). Relationships among social anxiety, self-focused attention, and experiential distress and avoidance. *Journal of Cognitive and Behavioral Psychotherapies*, *11*, 1–12.

Goldin, P. R., Jazaieri, H., & Gross, J. J. (2014). Emotion regulation in social anxiety disorder. In *Social anxiety (Third Edition)* (pp. 511–529). Academic Press. https://doi.org/10.1016/B978-0-12-394427-6.00017-0

Gostisha, A. J., Vitacco, M. J., Dismukes, A. R., Brieman, C., Merz, J., & Shirtcliff, E. A. (2014). Beyond physiological hypoarousal: The role of life stress and callous-unemotional traits in incarcerated adolescent males. *Hormones And Behavior*, *65*(5), 469–479. https://doi.org/10.1016/j.yhbeh.2014.03.016

Gratz, K. L., Tull, M. T., & Wagner, A. W. (2005). Applying DBT mindfulness skills to the treatment of clients with anxiety disorders. In *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment* (pp. 147–161). Springer US. https://doi.org/10.1007/0-387-25989-9_6

Grey, N. (2010). Treating complex traumatic stress disorders: An evidence-based guide C. A. Courtois and J. D. Ford (Eds.) New York: Guilford Press, 2009. pp. 448. £37.50 (hb). ISBN: 978-1-60623-039-8. *Behavioural and Cognitive Psychotherapy*, *38*, 376–382. https://doi.org/10.1017/S1352465810000147

Grynberg, D., & Pollatos, O. (2015). Alexithymia modulates the experience of the rubber hand illusion. *Frontiers in Human Neuroscience*, *9*. https://www.frontiersin.org/articles/10.3389/fnhum.2015.00357

Haldane, J., & Nickerson, A. (2016). The Impact of interpersonal and noninterpersonal trauma on psychological symptoms in refugees: The moderating role of gender and trauma type. *Journal of Traumatic Stress*, *29*(5), 457–465. https://doi.org/10.1002/jts.22132

Ham, T. E., Bonnelle, V., Hellyer, P., Jilka, S., Robertson, I. H., Leech, R., & Sharp, D. J. (2014). The neural basis of impaired self-awareness after traumatic brain injury. *Brain*, *137*(2), 586–597. https://doi.org/10.1093/brain/awt350

Haskell, L., & Randall, M. (2019). Impact of trauma on adult sexual assault victims: What the criminal justice system needs to know. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3417763

Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: a functional dimensional approach to diagnosis and

treatment. *Journal Of Consulting And Clinical Psychology*, *64*, 1152–1168. https://doi.org/10.1037/0022-006X.64.6.1152

Hayrynen, N. R. (2022). *Developing the Wise Mind: Exploring the Experience of DBT*. Michigan School of Psychology.

Heard, H. L., & Linehan, M. M. (1994). Dialectical behavior therapy: an integrative approach to the treatment of borderline personality disorder. *Journal of Psychotherapy Integration*, *4* (1), 55–82. https://doi.org/10.1037/h0101147

Hebert, K. R., Fales, J., Nangle, D. W., Papadakis, A. A., & Grover, R. L. (2013). Linking social anxiety and adolescent romantic relationship functioning: Indirect effects and the importance of peers. *Journal of Youth And Adolescence*, *42*(11), 1708–1720. https://doi.org/10.1007/s10964-012-9878-0

Hedman, E., Ström, P., Stünkel, A., & Mörtberg, E. (2013). Shame and guilt in social anxiety disorder: effects of cognitive behavior therapy and association with social anxiety and depressive symptoms. *PLoS one*, *8*(4), e61713. https://doi.org/10.1371/journal.pone.0061713

Henriques, G. R., & Glover, A. (2011). *A* unified approach to conceptualizing people in psychotherapy. https://doi.org/10.1037/e699542011-001

Herman, J. P., McKlveen, J. M., Ghosal, S., Kopp, B., Wulsin, A., Makinson, R., Scheimann, J., & Myers, B. (2016). Regulation of the hypothalamic-pituitary-adrenocortical stress response. In *Comprehensive physiology* (pp. 603–621). American Cancer Society. https://doi.org/10.1002/cphy.c150015

Hofmann, S. G. (2007). Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications. *Cognitive Behaviour Therapy*, *36*(4), 193–209. https://doi.org/10.1080/16506070701421313

Hofmann, S. G., & Gómez, A. F. (2017). Mindfulness-based interventions for anxiety and depression. *Psychiatric clinics*, *40*(4), 739–749. https://doi.org/10.1016/j.psc.2017.08.008

Hohls, J. K., König, H. H., Quirke, E., & Hajek, A. (2021). Anxiety, depression and quality of life—a systematic review of evidence from longitudinal observational studies. *International Journal Of Environmental Research And Public Health*, *18*(22), 12022. https://doi.org/10.3390/ijerph182212022

Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse & Neglect*, *32*(8), 797–810. https://doi.org/10.1016/j.chiabu.2008.02.004

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A Meta-Analytic Review. *PLOS medicine*, *7*(7), e1000316. https://doi.org/10.1371/journal.pmed.1000316

Horowitz, M. J. (1993). Stress-response syndromes. In J. P. Wilson & B. Raphael (Eds.), *International Handbook of Traumatic Stress Syndromes* (pp. 49–60). Springer US. https://doi.org/10.1007/978-1-4615-2820-3_4

Hoyer, J., Braeuer, D., Crawcour, S., Klumbies, E., & Kirschbaum, C. (2013). Depersonalization/derealization during acute social stress in social phobia. *Journal of Anxiety Disorders*, *27*(2), 178–187. https://doi.org/10.1016/j.janxdis.2013.01.002

Ibañez, A., Gleichgerrcht, E., & Manes, F. (2010). Clinical effects of insular damage in humans. *Brain Structure & Function*, *214*(5–6), 397–410. https://doi.org/10.1007/s00429-010-0256-y

Jaffee, S. R. (2017). Child maltreatment and risk for psychopathology in childhood and adulthood. *Annual Review Of Clinical Psychology*, *13*, 525–551. https://doi.org/10.1146/annurev-clinpsy-032816-045005

Jenkins, W., & Smart, K. (2020). Somatization in acute care pediatrics: Respecting the mind-body connection. *Clinical Child Psychology and Psychiatry*, *25*(3), 604–609. https://doi.org/10.1177/1359104520905065

Juruena, M. F., Eror, F., Cleare, A. J., & Young, A. H. (2020). The Role of early life stress in hpa axis and anxiety. In Y.-K. Kim (Ed.), *Anxiety disorders: Rethinking and understanding recent discoveries* (pp. 141–153). Springer. https://doi.org/10.1007/978-981-32-9705-0_9

Kaplan, S. C., Levinson, C. A., Rodebaugh, T. L., Menatti, A., & Weeks, J. W. (2015). Social anxiety and the Big five personality traits: The interactive relationship of trust and openness. *Cognitive Behaviour Therapy*, *44*(3), 212–222. https://doi.org/10.1080/16506073.2015.1008032

Kashdan, T. B., & Farmer, A. S. (2014). Differentiating emotions across contexts: Comparing adults with and without social anxiety disorder using random, social interaction, and daily experience sampling. *Emotion (Washington, D.C.)*, *14*(3), 629–638. https://doi.org/10.1037/a0035796

Kashdan, T. B., Farmer, A. S., Adams, L. M., Ferssizidis, P., McKnight, P. E., & Nezlek, J. B. (2013). Distinguishing healthy adults from people with social anxiety disorder: Evidence

for the value of experiential avoidance and positive emotions in everyday social interactions. *Journal Of Abnormal Psychology*, *122*(3), 645–655. https://doi.org/10.1037/a0032733

Kashdan, T. B., Goodman, F. R., Machell, K. A., Kleiman, E. M., Monfort, S. S., Ciarrochi, J., & Nezlek, J. B. (2014). A contextual approach to experiential avoidance and social anxiety: Evidence from an experimental interaction and daily interactions of people with social anxiety disorder. *Emotion (Washington, D.C.)*, *14*(4), 769–781. https://doi.org/10.1037/a0035935

Kearney, B. E., & Lanius, R. A. (2022). The brain-body disconnect: A somatic sensory basis for trauma-related disorders. *Frontiers in Neuroscience*, *16*, 1881. https://www.frontiersin.org/articles/10.3389/fnins.2022.1015749

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, *62*(6), 593–602. https://doi.org/10.1001/archpsyc.62.6.593

Klein, T., Ullsperger, M., & Danielmeier, C. (2013). Error awareness and the insula: Links to neurological and psychiatric diseases. *Frontiers In Human Neuroscience*, *7*, https://www.frontiersin.org/articles/10.3389/fnhum.2013.00014

Koerner, K. (2013). What must you know and do to get good outcomes with DBT? *Behavior Therapy*, *44*(4), 568–579. https://doi.org/10.1016/j.beth.2013.03.005

Koerner, K., & Dimeff, L. A. (2007). Overview of dialectical behavior therapy. In *Dialectical behavior therapy in clinical practice: Applications across disorders and settings* (pp. 1–18). Guilford Press.

Koyuncu, A., İnce, E., Ertekin, E., & Tükel, R. (2019). Comorbidity in social anxiety disorder: Diagnostic and therapeutic challenges. *Drugs In Context*, *8*, 212573. https://doi.org/10.7573/dic.212573

Kroes, M. C. W., Whalley, M. G., Rugg, M. D., & Brewin, C. R. (2011). Association between flashbacks and structural brain abnormalities in posttraumatic stress disorder. *European Psychiatry: The Journal of the Association of European Psychiatrists*, *26*(8), 525–531. https://doi.org/10.1016/j.eurpsy.2011.03.002

Krystal, H. (1982). Alexithymia and the effectiveness of psychoanalytic treatment. *International Journal of Psychoanalytic Psychotherapy*, *9*, 353–378.

Kubany, E. S., & Manke, F. P. (1995). Cognitive therapy for trauma-related guilt: Conceptual bases and treatment outlines. *Cognitive And Behavioral Practice*, *2*(1), 27–61. https://doi.org/10.1016/S1077-7229(05)80004-5

Kuczyska, A. W.-W. and A. (2010). *Interpersonal Trauma and Its Consequences in Adulthood* (A. Widera-Wysoczanska & A. Kuczynska, Eds.; Unabridged edition edition). Cambridge Scholars Publishing.

Kuhlman, K. R., Vargas, I., Geiss, E. G., & Lopez-Duran, N. L. (2015). Age of trauma onset and hpa axis dysregulation among trauma-exposed youth. *Journal Of Traumatic Stress*, *28*(6), 572–579. https://doi.org/10.1002/jts.22054

Kuo, J. R., & Linehan, M. M. (2009). Disentangling emotion processes in borderline personality disorder: Physiological and self-reported assessment of biological vulnerability, baseline intensity, and reactivity to emotionally evocative stimuli. *Journal Of Abnormal Psychology*, *118*(3), 531–544. https://doi.org/10.1037/a0016392

Kwon, A., Lee, H. S., & Lee, S. H. (2021). The mediation effect of hyperarousal symptoms on the relationship between childhood physical abuse and suicidal ideation of patients with PTSD. *Frontiers In Psychiatry*, *12*, 613735. https://doi.org/10.3389/fpsyt.2021.613735

La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal Of Abnormal Child Psychology*, *26*(2), 83–94. https://doi.org/10.1023/a:1022684520514

Lahousen, T., Unterrainer, H. F., & Kapfhammer, H. P. (2019). psychobiology of attachment and trauma—some general remarks from a clinical perspective. *Frontiers in Psychiatry*, *10*, 914. https://doi.org/10.3389/fpsyt.2019.00914

Lane, R. D., Sechrest, L., Riedel, R., Shapiro, D. E., & Kaszniak, A. W. (2000). Pervasive emotion recognition deficit common to alexithymia and the repressive coping style. *Psychosomatic Medicine*, *62*(4), 492–501. https://doi.org/10.1097/00006842-200007000-00007

Lanius, R. A., Terpou, B. A., & McKinnon, M. C. (2020). The sense of self in the aftermath of trauma: Lessons from the default mode network in posttraumatic stress disorder. *European Journal of Psychotraumatology*, *11*(1), 1807703. https://doi.org/10.1080/20008198.2020.1807703

Lebowitz, L., & Roth, S. (1994). "I felt like a slut": The cultural context and women's response to being raped. *Journal Of Traumatic Stress*, *7*(3), 363–390. https://doi.org/10.1007/BF02102783

Leigh, E., & Clark, D. M. (2018). Understanding social anxiety disorder in adolescents and improving treatment outcomes: Applying the cognitive model of Clark and Wells (1995).

Clinical Child And Family Psychology Review, *21*(3), 388–414. https://doi.org/10.1007/s10567-018-0258-5

Leitenberg, H., Greenwald, E., & Cado, S. (1992). A retrospective study of long-term methods of coping with having been sexually abused during childhood. *Child Abuse & Neglect*, *16*(3), 399–407. https://doi.org/10.1016/0145-2134(92)90049-W

Lew, M., Matta, C., Tripp-Tebo, C., & Watts, D. (2006). Dialectical behavior therapy (DBT) for individuals with intellectual disabilities: A program description. *Mental Health Aspects of Developmental Disabilities*, *9*(1), 1.

Lieberz, J., Shamay-Tsoory, S. G., Saporta, N., Kanterman, A., Gorni, J., Esser, T., Kuskova, E., Schultz, J., Hurlemann, R., & Scheele, D. (2022). Behavioral and neural dissociation of social anxiety and loneliness. *Journal of Neuroscience*, *42*(12), 2570–2583. https://doi.org/10.1523/JNEUROSCI.2029-21.2022

Lifton, R. J. (1988). Understanding the traumatized self. In *Human adaptation to extreme stress: From the holocaust to Vietnam* (pp. 7–31). Boston, MA: Springer US. https://doi.org/10.1007/978-1-4899-0786-8_1

Lilly, M. M. (2011). The contributions of interpersonal trauma exposure and world assumptions to predicting dissociation in undergraduates. *Journal of Trauma & Dissociation: The Official Journal of the International Society for the Study of Dissociation (ISSD)*, *12*(4), 375–392. https://doi.org/10.1080/15299732.2011.573761

Lim, M. H., Rodebaugh, T. L., Zyphur, M. J., & Gleeson, J. F. (2016). Loneliness over time: The crucial role of social anxiety. *Journal Of Abnormal Psychology*, *125*(5), 620–630. https://doi.org/10.1037/abn0000162

Linehan, M. (1987). Dialectical behavior therapy for borderline personality disorder. Theory and method. *Bulletin of the Menninger Clinic*, *51*, 261–276.

Linehan, M. (2014). *DBT? Skills Training Manual, Second Edition*. Guilford Publications.

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder* (pp. xvii, 558). Guilford Press.

Linehan, M. M. (2015). *DBT® skills training handouts and worksheets, 2nd ed* (pp. xxii, 422). Guilford Press.

Linehan, M. M. (2018). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. Guilford Publications.

Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., McDavid, J., Comtois, K. A., & Murray-Gregory, A. M. (2015). Dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry*, *72*(5), 475–482. https://doi.org/10.1001/jamapsychiatry.2014.3039

Linehan, M. M., & Schmidt III, H. (1995). The dialectics of effective treatment of borderline personality disorder. In *Theories of behavior therapy: Exploring behavior change* (pp. 553–584). American Psychological Association. https://doi.org/10.1037/10169-020

Linehan, M. M., & Wilks, C. R. (2015). The course and evolution of dialectical behavior therapy. *American Journal of Psychotherapy*, *69*(2), 97–110. https://doi.org/10.1176/appi.psychotherapy.2015.69.2.97

Longarzo, M., D'Olimpio, F., Chiavazzo, A., Santangelo, G., Trojano, L., & Grossi, D. (2015). The relationships between interoception and alexithymic trait. The Self-Awareness

Questionnaire in healthy subjects. *Frontiers in Psychology*, *6*. https://doi.org/10.3389/fpsyg.2015.01149

Lumley, M. A., Neely, L. C., & Burger, A. J. (2007). The assessment of alexithymia in medical settings: Implications for understanding and treating health problems. *Journal of Personality Assessment*, *89*(3), 230–246. https://doi.org/10.1080/00223890701629698

Lynch, T. R., Morse, J. Q., Mendelson, T., & Robins, C. J. (2003). Dialectical behavior therapy for depressed older adults: A randomized pilot study. *The American Journal of Geriatric Psychiatry, 11*(1), 33–45.

Maeda, S., Sato, T., Shimada, H., & Tsumura, H. (2017). Post-event processing predicts impaired cortisol recovery following social stressor: The moderating role of social anxiety. *Frontiers in Psychology*, *8*. https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01919

Maes, M., Nelemans, S. A., Danneel, S., Fernández-Castilla, B., Van den Noortgate, W., Goossens, L., & Vanhalst, J. (2019). Loneliness and social anxiety across childhood and adolescence: Multilevel meta-analyses of cross-sectional and longitudinal associations. *Developmental Psychology*, *55*(7), 1548–1565. https://doi.org/10.1037/dev0000719

Majohr, K. L., Leenen, K., Grabe, H. J., Jenewein, J., Nuñez, D. G., & Rufer, M. (2011). Alexithymia and its relationship to dissociation in patients with panic disorder. *The Journal Of Nervous And Mental Disease*, *199*(10), 773–777. https://doi.org/10.1097/NMD.0b013e31822fcbfb

Malhotra, A., & Baker, J. (2023). Group therapy. In *StatPearls*. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK549812/

Marchesi, C., Brusamonti, E., & Maggini, C. (2000). Are alexithymia, depression, and anxiety distinct constructs in affective disorders?. *Journal Of Psychosomatic Research*, *49*(1), 43–49. https://doi.org/10.1016/S0022-3999(00)00084-2

Marks, M. W. (2022). A Short-Term Training Clinic Model for Dialectical Behavior Therapy (DBT) in Treating Borderline Personality Disorder (BPD): The Case of "Jane." *Pragmatic Case Studies in Psychotherapy*, *18*(1), Article 1. https://doi.org/10.55818/pcsp.v18i1.2102

Matuz-Budai, T., Lábadi, B., Kohn, E., Matuz, A., Zsidó, A. N., Inhóf, O., Kállai, J., Szolcsányi, T., Perlaki, G., Orsi, G., Nagy, S. A., Janszky, J., & Darnai, G. (2022). Individual differences in the experience of body ownership are related to cortical thickness. *Scientific Reports*, *12*(1), 808. Article 1. https://doi.org/10.1038/s41598-021-04720-8

May, J. M., Richardi, T. M., & Barth, K. S. (2016). Dialectical behavior therapy as treatment for borderline personality disorder. *The Mental Health Clinician*, *6*(2), 62–67. https://doi.org/10.9740/mhc.2016.03.62

McKay, M., Wood, J. C., & Brantley, J. (2019). *The dialectical behavior therapy skills workbook: Practical DBT exercises for learning mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance*. New Harbinger Publications.

McMain, S., Korman, L. M., & Dimeff, L. (2001). Dialectical behavior therapy and the treatment of emotion dysregulation. *Journal of Clinical Psychology*, *57*(2), 183–196. https://doi.org/10.1002/1097-4679(200102)57:2<183::aid-jclp5>3.0.co;2-y

McMillan, K. A., Sareen, J., & Asmundson, G. J. G. (2014). Social anxiety disorder is associated with PTSD symptom presentation: An exploratory study within a nationally

representative sample. *Journal Of Traumatic Stress*, *27*(5), 602–609. https://doi.org/10.1002/jts.21952

van der Kolk B. (2015). *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma* (Reprint edition). Penguin Books.

Meganck, R., Vanheule, S., & Desmet, M. (2013). Affective processing and affect regulation: A clinical interview study. *Journal of the American Psychoanalytic Association*, *61*(6), NP12-NP16. https://doi.org/10.1177/0003065113516365

Mehling, W. (2016). Differentiating attention styles and regulatory aspects of self-reported interoceptive sensibility. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, *371*(1708). https://doi.org/10.1098/rstb.2016.0013

Mehling, W. E., Gopisetty, V., Daubenmier, J., Price, C. J., Hecht, F. M., & Stewart, A. (2009). Body awareness: Construct and self-report measures. *PloS one*, *4*(5), e5614. https://doi.org/10.1371/journal.pone.0005614

Michelson, L. K., & Ray, W. J. (1996). *Handbook of dissociation: Theoretical, empirical, and clinical perspectives*. Springer Science & Business Media.

Mogoaşe, C., David, D., & Koster, E. H. (2014). Clinical efficacy of attentional bias modification procedures: An updated meta-analysis. *Journal of Clinical Psychology*, *70*(12), 1133–1157. https://doi.org/10.1002/jclp.22081

Morie, K. P., Zhai, Z. W., Potenza, M. N., & Mayes, L. C. (2020). Alexithymia, emotion-regulation strategies, and traumatic experiences in prenatally cocaine-exposed young adults. *The American Journal On Addictions*, *29*(6), 492–499. https://doi.org/10.1111/ajad.13056

Murphy, J., Brewer, R., Catmur, C., & Bird, G. (2017). Interoception and psychopathology: A developmental neuroscience perspective. *Developmental Cognitive Neuroscience*, *23*, 45–56. https://doi.org/10.1016/j.dcn.2016.12.006

Murphy, J., Catmur, C., & Bird, G. (2018). Alexithymia is associated with a multidomain, multidimensional failure of interoception: Evidence from novel tests. *Journal Of Experimental Psychology. General*, *147*(3), 398–408. https://doi.org/10.1037/xge0000366

Musser, N., Zalewski, M., Stepp, S., & Lewis, J. (2018). A systematic review of negative parenting practices predicting borderline personality disorder: Are we measuring biosocial theory's 'invalidating environment'? *Clinical Psychology Review*, *65*, 1–16. https://doi.org/10.1016/j.cpr.2018.06.003

Nakao, M., & Barsky, A. J. (2007). Clinical application of somatosensory amplification in psychosomatic medicine. *BioPsychoSocial Medicine*, *1*, 1-7. https://doi.org/10.1186/1751-0759-1-17

Nanni, V., Uher, R., & Danese, A. (2012). Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression: A meta-analysis. *The American Journal of Psychiatry*, *169*(2), 141–151. https://doi.org/10.1176/appi.ajp.2011.11020335

National Collaborating Centre for Mental Health. (2013). Social anxiety disorder. In *Social Anxiety Disorder: Recognition, Assessment and Treatment*. British Psychological Society (UK). https://www.ncbi.nlm.nih.gov/books/NBK327674/

Noll, L. K., Lewis, J., Zalewski, M., Martin, C. G., Roos, L., Musser, N., & Reinhardt, K. (2020). Initiating a DBT consultation team: Conceptual and practical considerations for

training clinics. *Training and Education in Professional Psychology*, *14*(3), 167–175. https://doi.org/10.1037/tep0000252

Nowakowski, M. E., McFarlane, T., & Cassin, S. (2013). Alexithymia and eating disorders: A critical review of the literature. *Journal Of Eating Disorders*, *1*, 1-14. https://doi.org/10.1186/2050-2974-1-21

Ogden, P., Pain, C., & Fisher, J. (2006). A sensorimotor approach to the treatment of trauma and dissociation. *Psychiatric Clinics of North America*, *29*(1), 263–279. https://doi.org/10.1016/j.psc.2005.10.012

Oh, D. H. (2012). Traumatic experiences disrupt amygdala – prefrontal connectivity. In *the amygdala—A discrete multitasking manager*. London, UK: IntechOpen. https://doi.org/10.5772/48691

Orsillo, S. M., & Roemer, L. (Eds.). (2005). *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment*. Springer US. https://doi.org/10.1007/b136521

Panayiotou, G., Leonidou, C., Constantinou, E., & Michaelides, M. P. (2020). Self-awareness in alexithymia and associations with social anxiety. *Current Psychology*, *39*(5), 1600–1609. https://doi.org/10.1007/s12144-018-9855-1

Park, C. L. (2022). Meaning making following trauma. *Frontiers in Psychology*, *13*. https://www.frontiersin.org/articles/10.3389/fpsyg.2022.844891

Park, J., Jun, J. Y., Lee, Y. J., Kim, S., Lee, S.-H., Yoo, S. Y., & Kim, S. J. (2015). The association between alexithymia and posttraumatic stress symptoms following multiple exposures to traumatic events in North Korean refugees. *Journal of Psychosomatic Research*, *78*(1), 77–81. https://doi.org/10.1016/j.jpsychores.2014.09.007

Patrikelis, P., Lucci, G., Alexoudi, A., Korfias, S., Messinis, L., Nasios, G., Papasilekas, T., Sakas, D., & Gatzonis, S. (2019). Addressing evidence linking secondary alexithymia to aberrant humor processing. *Behavioural Neurology*, *2019*, 1803624. https://doi.org/10.1155/2019/1803624

Paulus, D. J., Wadsworth, L. P., & Hayes-Skelton, S. A. (2015). Mental health literacy for anxiety disorders: How perceptions of symptom severity might relate to recognition of psychological distress. *Journal of public mental health*, *14*(2), 94–106. https://doi.org/10.1108/JPMH-09-2013-0064

Pavlova, B., Perlis, R. H., Alda, M., & Uher, R. (2015). Lifetime prevalence of anxiety disorders in people with bipolar disorder: A systematic review and meta-analysis. *The Lancet Psychiatry*, *2*(8), 710–717. https://doi.org/10.1016/S2215-0366(15)00112-1

Payne, P., Levine, P. A., & Crane-Godreau, M. A. (2015). Somatic experiencing: Using interoception and proprioception as core elements of trauma therapy. *Frontiers in Psychology*, *6*, 93. https://doi.org/10.3389/fpsyg.2015.00093

Peplau, L. A., & Caldwell, M. A. (1978). Loneliness: A cognitive analysis. *Essence: Issues in the study of ageing, dying, and death*, *2*(4), 207–220.

Perowne, S., & Mansell, W. (2002). Social anxiety, self-focused attention, and the discrimination of negative, neutral and positive audience members by their non-verbal behaviours. *Behavioural and Cognitive Psychotherapy*, *30*(1), 11–23. https://doi.org/10.1017/S1352465802001030

Perry, B. D., & Pollard, R. (1998). Homeostasis, stress, trauma, and adaptation: A neurodevelopmental view of childhood trauma. *Child and Adolescent Psychiatric Clinics*, *7*(1), 33–51. https://doi.org/10.1016/S1056-4993(18)30258-X

Peters, W., Rice, S., Alvarez-Jimenez, M., Hetrick, S. E., Halpin, E., Kamitsis, I., Santesteban-Echarri, O., & Bendall, S. (2022). Relative efficacy of psychological interventions following interpersonal trauma on anxiety, depression, substance use, and PTSD symptoms in young people: A meta-analysis. *Early Intervention in Psychiatry*, *16*(11), 1175–1184. https://doi.org/10.1111/eip.13265

Preece, D., Becerra, R., Robinson, K., Allan, A., Boyes, M., Chen, W., Hasking, P., & Gross, J. (2020). What is alexithymia? Using factor analysis to establish its latent structure and relationship with fantasizing and emotional reactivity. *Journal of Personality, 88*(6), 1162-1176. https://doi.org/10.1111/jopy.12563

Price, C. (2005). Body-oriented therapy in recovery from child sexual abuse: an efficacy study. *Alternative Therapies In Health And Medicine*, *11*(5), 46–57.

Price, C. J., & Hooven, C. (2018). Interoceptive awareness skills for emotion regulation: theory and approach of mindful awareness in body-oriented therapy (MABT). *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.00798

Price, C. J., & Thompson, E. A. (2007). Measuring dimensions of body connection: Body awareness and bodily dissociation. *Journal of Alternative and Complementary Medicine (New York, N.Y.)*, *13*(9), 945–953. https://doi.org/10.1089/acm.2007.0537

Pyszczynski, T., & Kesebir, P. (2010). Anxiety buffer disruption theory: A terror management account of posttraumatic stress disorder. *Anxiety, Stress, and Coping*, *24*, 3–26. https://doi.org/10.1080/10615806.2010.517524

Pyszczynski, T., & Kesebir, P. (2011). Anxiety buffer disruption theory: A terror management account of posttraumatic stress disorder. *Anxiety, Stress, and Coping*, *24*(1), 3–26. https://doi.org/10.1080/10615806.2010.517524

Quadt, L., Esposito, G., Critchley, H. D., & Garfinkel, S. N. (2020). Brain-body interactions underlying the association of loneliness with mental and physical health. *Neuroscience and Biobehavioral Reviews*, *116*, 283–300. https://doi.org/10.1016/j.neubiorev.2020.06.015

Astaneh, R., Mirzaian, B., & Hassanzadeh, R. (2020). The effectiveness of skill training based on dialectical behavior therapy on emotional regulation, social avoidance and distress in adolescents with social anxiety disorder. *Journal of Torbat Heydariyeh University of Medical Sciences*, *8*(3), 52–60.

Radetzki, P. A., Wrath, A. J., Le, T., & Adams, G. C. (2021). Alexithymia is a mediating factor in the relationship between adult attachment and severity of depression and social anxiety. *Journal of Affective Disorders*, *295*, 846–855. https://doi.org/10.1016/j.jad.2021.08.057

Rajmohan, V., & Mohandas, E. (2007). The limbic system. *Indian Journal of Psychiatry*, *49*(2), 132–139. https://doi.org/10.4103/0019-5545.33264

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, *35*(8), 741–756. https://doi.org/10.1016/s0005-7967(97)00022-3

Rathus, J. H., & Miller, A. L. (2014). *DBT Skills Manual for Adolescents*. Guilford Publications.

Reeves, M. D. (2007). *The Effect of Invalidation on Emotion Regulation: An Empirical Investigation of Linehan's Biosocial Theory*.The Florida State University.

Razian, S., Heydarinasab, L., Shairi, M. R., & Bozorgmehr, A. (2018). The effect of Mindfulness-Based Stress Reduction (MBSR) on increasing the scales of mindfulness in Iranian people with social anxiety disorder. *www. mjltm. com info@ mjltm. org, 131*.

Ressler, K. J. (2010). Amygdala activity, fear, and anxiety: Modulation by stress. *Biological Psychiatry*, *67*(12), 1117–1119. https://doi.org/10.1016/j.biopsych.2010.04.027

Rizvi, S. L., & Ritschel, L. A. (2014). Mastering the art of chain analysis in dialectical behavior therapy. *Cognitive and Behavioral Practice*, *21*(3), 335–349. https://doi.org/10.1016/j.cbpra.2013.09.002

Rizvi, S. L., Steffel, L. M., & Carson-Wong, A. (2013). An overview of dialectical behavior therapy for professional psychologists. *Professional Psychology: Research and Practice*, *44*(2), 73–80. https://doi.org/10.1037/a0029808

Rosenbaum, R. S., Gilboa, A., & Moscovitch, M. (2014). Case studies continue to illuminate the cognitive neuroscience of memory. *Annals of the New York Academy of Sciences*, *1316*(1), 105–133. https://doi.org/10.1111/nyas.12467

Rothbaum, B., Foa, E., & Hembree, E. (2007). *Reclaiming your life from a traumatic experience: A prolonged exposure treatment program workbook*. Oxford University Press, USA.

Salters-Pedneault, K., Tull, M. T., & Roemer, L. (2004). The role of avoidance of emotional material in the anxiety disorders. *Applied and Preventive Psychology*, *11*(2), 95–114. https://doi.org/10.1016/j.appsy.2004.09.001

Samaratunge, U. (2015). *Human Emotional and Rational Mind Analytical Tool for Wise Mind Establishment Process*.

Scheffers, M., Hoek, M., Bosscher, R. J., van Duijn, M. A. J., Schoevers, R. A., & van Busschbach, J. T. (2017). Negative body experience in women with early childhood trauma: Associations with trauma severity and dissociation. *European Journal of Psychotraumatology*, *8*(1), 1322892. https://doi.org/10.1080/20008198.2017.1322892

Schore, A. N. (2009). Attachment trauma and the developing right brain: Origins of pathological dissociation. *Dissociation and the dissociative disorders: DSM-V and beyond* (pp. 107–141). Routledge/Taylor & Francis Group.

Schwerdtfeger Gallus, K. L., Shreffler, K. M., Merten, M. J., & Cox, R. B. (2015). Interpersonal trauma and depressive symptoms in early adolescents: Exploring the moderating roles of parent and school connectedness. *The Journal of Early Adolescence*, *35*(7), 990–1013. https://doi.org/10.1177/0272431614548067

Seth, A. K., Suzuki, K., & Critchley, H. D. (2012). An interoceptive predictive coding model of conscious presence. *Frontiers in Psychology*, *2*. https://www.frontiersin.org/articles/10.3389/fpsyg.2011.00395

Sharp, K. M., Schwartz, L. E., Barnes, S. E., Jamison, L. E., Miller-Graff, L. E., & Howell, K. H. (2017). Differential influence of social support in emerging adulthood across sources of support and profiles of interpersonal and non-interpersonal potentially traumatic experiences. *Journal of Aggression, Maltreatment & Trauma*, *26*(7), 736–755. https://doi.org/10.1080/10926771.2017.1289999

Sherin, J. E., & Nemeroff, C. B. (2011). Post-traumatic stress disorder: The neurobiological impact of psychological trauma. *Dialogues in Clinical Neuroscience*, *13*(3), 263–278.

Shin, L. M., & Liberzon, I. (2010). The neurocircuitry of fear, stress, and anxiety disorders. *Neuropsychopharmacology*, *35*(1), 169–191. https://doi.org/10.1038/npp.2009.83

Siegel, D. J. (1999). *The developing mind: Toward a neurobiology of interpersonal experience*. Guilford Press.

Sifneos, P. E. (1996). Alexithymia: Past and present. *The American Journal of Psychiatry*, *153*(7 Suppl), 137–142. https://doi.org/10.1176/ajp.153.7.137

Šimić, G., Tkalčić, M., Vukić, V., Mulc, D., Španić, E., Šagud, M., Olucha-Bordonau, F. E., Vukšić, M., & R. Hof, P. (2021). Understanding emotions: Origins and roles of the amygdala. *Biomolecules*, *11*(6), 823. https://doi.org/10.3390/biom11060823

Sleire, M. (2016). *Does emotion regulation change in treatment? An investigation of cognitive-oriented therapies* [Master thesis]. https://www.duo.uio.no/handle/10852/50680

Social Anxiety Disorder | Anxiety and Depression Association of America, ADAA. (n.d.). Retrieved December 27, 2023, from https://adaa.org/understanding-anxiety/social-anxiety-disorder

Southward, M. W., Eberle, J. W., & Neacsiu, A. D. (2022). Multilevel associations of daily skill use and effectiveness with anxiety, depression, and stress in a transdiagnostic sample undergoing dialectical behavior therapy skills training. *Cognitive Behaviour Therapy*, *51*(2), 114–129. https://doi.org/10.1080/16506073.2021.1907614

Spoor, S. T., Bekker, M. H., Van Heck, G. L., Croon, M. A., & Van Strien, T. (2005). Inner body and outward appearance: The relationships between appearance orientation, eating disorder symptoms, and internal body awareness. *Eating Disorders*, *13*(5), 479–490. https://doi.org/10.1080/10640260500297267

Spurr, J. M., & Stopa, L. (2002). Self-focused attention in social phobia and social anxiety. *Clinical Psychology Review*, *22*(7), 947–975. https://doi.org/10.1016/S0272-7358(02)00107-1

Stanley, B., Brown, G., Brent, D. A., Wells, K., Poling, K., Curry, J., Kennard, B. D., Wagner, A., Cwik, M., Klomek, A. B., Goldstein, T., Vitiello, B., Barnett, S., Daniel, S., & Hughes, J. (2009). Cognitive behavior therapy for suicide prevention (CBT-SP): Treatment model, feasibility and acceptability. *Journal of the American Academy of*

Child and Adolescent Psychiatry, *48*(10), 1005–1013. https://doi.org/10.1097/CHI.0b013e3181b5dbfe

Stein, D. J., Lim, C. C. W., Roest, A. M., de Jonge, P., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Benjet, C., Bromet, E. J., Bruffaerts, R., de Girolamo, G., Florescu, S., Gureje, O., Haro, J. M., Harris, M. G., He, Y., Hinkov, H., Horiguchi, I., Hu, C., … WHO World Mental Health Survey Collaborators. (2017). The cross-national epidemiology of social anxiety disorder: Data from the World Mental Health Survey Initiative. *BMC Medicine*, *15*, 1-21. https://doi.org/10.1186/s12916-017-0889-2

Stepp, S. D., Epler, A. J., Jahng, S., & Trull, T. J. (2008). The effect of dialectical behavior therapy skills use on borderline personality disorder features. *Journal of Personality Disorders*, *22*(6), 549–563. https://doi.org/10.1521/pedi.2008.22.6.549

Stevens, S., Gerlach, A. L., Cludius, B., Silkens, A., Craske, M. G., & Hermann, C. (2011). Heartbeat perception in social anxiety before and during speech anticipation. *Behaviour Research and Therapy*, *49*(2), 138–143. https://doi.org/10.1016/j.brat.2010.11.009

Substance Abuse Treatment: Group Therapy. (2005). Substance Abuse and Mental Health Services Administration (US). http://www.ncbi.nlm.nih.gov/books/NBK64220/

Swales, M., & Dunkley, C. (2020). Principles of skills assessment in dialectical behavior therapy. *Cognitive and Behavioral Practice*, *27*(1), 18–29. https://doi.org/10.1016/j.cbpra.2019.05.001

Sweezy, M. (2011). Treating trauma after dialectical behavioral therapy. *Journal of Psychotherapy Integration*, *21*(1), 90–102. https://doi.org/10.1037/a0023011

Taylor, G. J., & Bagby, R. M. (2004). New trends in alexithymia research. *Psychotherapy and Psychosomatics*, *73*(2), 68–77. https://doi.org/10.1159/000075537

Taylor, G. J., Bagby, R. M., & Parker, J. D. (1997). *Disorders of affect regulation: alexithymia in medical and psychiatric illness*. Cambridge University Press. https://doi.org/10.1017/CBO9780511526831

Taylor, P., Rietzschel, J., Danquah, A., & Berry, K. (2015). The role of attachment style, attachment to therapist, and working alliance in response to psychological therapy. *Psychology and Psychotherapy: Theory, Research and Practice*, *88* (3), 240-253. https://doi.org/10.1111/papt.12045

Terasawa, Y., Shibata, M., Moriguchi, Y., & Umeda, S. (2013). Anterior insular cortex mediates bodily sensibility and social anxiety. *Social Cognitive and Affective Neuroscience*, *8*(3), 259–266. https://doi.org/10.1093/scan/nss108

Thomas, R., DiLillo, D., Walsh, K., & Polusny, M. A. (2011). Pathways from child sexual abuse to adult depression: The role of parental socialization of emotions and alexithymia. *Psychology of Violence*, *1*(2), 121–135. https://doi.org/10.1037/a0022469

Trickett, P. K., Noll, J. G., & Putnam, F. W. (2011). The impact of sexual abuse on female development: Lessons from a multigenerational, longitudinal research study. *Development and Psychopathology*, *23*(2), 453–476. https://doi.org/10.1017/S0954579411000174

Trifiletti, E., Pedrazza, M., Berlanda, S., & Pyszczynski, T. (2017). Burnout disrupts anxiety buffer functioning among nurses: A three-way interaction model. *Frontiers in Psychology*, *8*, 1362. https://www.academia.edu/56273358/Burnout_Disrupts_Anxiety_Buffer_Functioning_Among_Nurses_A_Three_Way_Interaction_Model

Tsigos, C., Kyrou, I., Kassi, E., & Chrousos, G. P. (2000). Stress, endocrine physiology and pathophysiology. *Endotext*. MDText.com, Inc. http://www.ncbi.nlm.nih.gov/books/NBK278995/

Turk, C. L., Heimberg, R. G., Luterek, J. A., Mennin, D. S., & Fresco, D. M. (2005). Emotion dysregulation in generalized anxiety disorder: A comparison with social anxiety disorder. *Cognitive Therapy and Research*, *29*(1), 89–106. https://doi.org/10.1007/s10608-005-1651-1

van Bodegom, M., Homberg, J. R., & Henckens, M. J. (2017). Modulation of the hypothalamic-pituitary-adrenal axis by early life stress exposure. *Frontiers in Cellular Neuroscience*, *11*. https://doi.org/10.3389/fncel.2017.00087

van der Kolk, B. (2000). Posttraumatic stress disorder and the nature of trauma. *Dialogues in Clinical Neuroscience*, *2*(1), 7–22.

van der Kolk, B. A. (1994). The body keeps the score: Memory and the evolving psychobiology of posttraumatic stress. *Harvard Review of Psychiatry*, *1*(5), 253–265. https://doi.org/10.3109/10673229409017088

van der Kolk, B. A. (2002). Beyond the talking cure: Somatic experience and subcortical imprints in the treatment of trauma. In *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism* (pp. 57–83). American Psychological Association. https://doi.org/10.1037/10512-003

van der Kolk, B. A. (2006). Clinical Implications of Neuroscience Research in PTSD. *Annals of the New York Academy of Sciences*, *1071*, 277–293. https://doi.org/10.1196/annals.1364.022

Villalongo Andino, M., Garcia, K., & Richey, J. A. (2024). Can dialectical behavior therapy skills group treat social anxiety disorder? A Brief Integrative Review. *Frontiers in Psychology*, *14*. https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1331200

Walsh, C., Ryan, P., & Flynn, D. (2018). Exploring dialectical behaviour therapy clinicians' experiences of team consultation meetings. *Borderline Personality Disorder and Emotion Dysregulation*, *5*(1), 1-11. https://doi.org/10.1186/s40479-018-0080-1

Wulf, M. J., & Tom, V. J. (2023). Consequences of spinal cord injury on the sympathetic nervous system. *Frontiers in Cellular Neuroscience*, *17*. https://www.frontiersin.org/articles/10.3389/fncel.2023.999253

Yoon, H. J., Seo, E. H., Kim, J.-J., & Choo, I. H. (2019). Neural correlates of self-referential processing and their clinical implications in social anxiety disorder. *Clinical Psychopharmacology and Neuroscience*, *17*(1), 12–24. https://doi.org/10.9758/cpn.2019.17.1.12

Zorzella, K. P., Muller, R. T., Cribbie, R. A., Bambrah, V., & Classen, C. C. (2020). The role of alexithymia in trauma therapy outcomes: Examining Improvements in PTSD, dissociation, and interpersonal problems. *Psychological Trauma: Theory, Research, Practice and Policy*, *12*(1), 20–28. https://doi.org/10.1037/tra0000433

Appendix A

Recommended Readings

These recommended readings are intended to complement the workshop content and offer additional guidance for individuals seeking to deepen their understanding and implementation of trauma informed and DBT approaches.

1. *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma* by Bessel van der Kolk (2015).

This book delves into the intricate connections between the brain, mind, and body in the process of healing from trauma, providing valuable insights for individuals seeking a deeper understanding of their experiences.

2. *The Dialectical Behaviour Therapy Skills Workbook: Practical DBT Exercises for Learning Mindfulness, Interpersonal Effectiveness, Emotion Regulation, and Distress Tolerance* by Matthew McKay, Jeffrey C. Wood & Jeffrey Brantley (2019).

A comprehensive workbook offering practical exercises designed to enhance skills in mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance. This resource is particularly beneficial for those interested in applying DBT principles to their daily lives.

3. *DBT Skills Training Handouts and Worksheets* by Marsha Linehan (2014)

Authored by the creator of Dialectical Behaviour Therapy, Marsha Linehan.

This collection provides a wealth of handouts and worksheets for individuals engaged in DBT skills training. It serves as a valuable resource for reinforcing and applying learned skills.