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**THE USE OF SOMATIC EXPERIENCING™ IN THE
TREATMENT OF AN ADOLESCENT WITH
TRAUMA-BASED OBSESSIVE-COMPULSIVE DISORDER**

by

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THESIS

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in the

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at the

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PROMOTER: Dr Dunbar-Krige

October 2019

DECLARATION

I declare that this phenomenological case study enquiry, “The use of Somatic Experiencing™ in the treatment of an adolescent with trauma-based Obsessive Compulsive Disorder”, is my own work. All the sources used and quoted have been indicated by means of a complete reference.

A. I. Berman

May 2019



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-

With gratitude to G-d, I would like to express my sincere appreciation to the following people for supporting me on this journey and for teaching me, directly or indirectly, that between stimulus and response I have a choice for change and growth.

My mother, Anita

My husband, Samuel

My sons, Aryeh and Gavriel

My daughter, Moriya

You have taught me so much. I am still grappling and growing but traversing
the path is the journey.

I am grateful to Dr Helen Dunbar-Krige who guided me with patience and insight throughout this process. In her seemingly always calm way, sometimes a few words of guidance revealed a vista of clarity and insight for me.

I am grateful to Dr Elzette Fritz for sparking and expanding my original interest in the neurophysiology of trauma and for being a mentor as a psychotherapist.

ABSTRACT

When trauma precedes or coincides with the development of obsessive-compulsive disorder (OCD), a unique type of OCD develops. This is because, as the research shows, the neurophysiological reactions of trauma become “trapped” in the physiology of the client’s nervous system. Therefore, it is proposed that trauma adds an additional dimension to the treatment of OCD in paediatric and adolescent clients. It then becomes necessary to utilize a trauma-based treatment method, such as Somatic Experiencing™, to assist in resolving the obsessions and compulsions.

The developmental features of adolescence are of particular interest to the area of educational psychology. It has been established through research cited in this thesis that childhood trauma significantly affects neuronal development and Autonomic Nervous System regulation, and creates a greater predisposition to mental illness in adolescence and adulthood.. The adolescent brain is well known for the increased expression of dopamine in the prelimbic Prefrontal Cortex which is instrumental in increasing motivational salience. Due to this factor, associations formed by the adolescent between a behaviour and the environment are more difficult to change compared with other maturational stages. (Baker, Bisby & Richardson, 2016).

This phenomenological case study was based on therapy sessions with an adolescent client. Sessions were filmed (with consent from parent and child) and retrospectively analysed using the Interpretive Phenomenological Analysis (IPA) approach. The case study research design was used given that it is appropriate when the boundaries between phenomenon (OCD in adolescence) and context (types and role of trauma) may not be clear. The case study is able to include multiple connected sources of evidence which allow for triangulation of evidence (Yin, 2014). Finally, the preceding development of theoretical ideas guides collection and analysis of information (Yin, 2014).

The proposition of this study is that enhanced threat processing is the result of intense or prolonged involuntary impulses of the sympathetic nervous system (fight-or-flee response) and the parasympathetic nervous system (freeze response). Furthermore, the significant factor of coupling dynamics (i.e. cathecting) plays an important role in

meaning-association. It is, therefore, hypothesised that the involuntary impulses resulting from nervous system activation, combined with coupling dynamics, may throw some light on the preservative actions or compulsions which are a defining characteristic of OCD.

Recommendations for practice include acknowledgement of the central role that lack of emotional safety in core childhood relationships (attachment or complex trauma) plays in contributing to the neurophysiology of the client. At the heart of the SE™ methodology is the concept of self-regulation, the ability to “handle our own states of arousal and our difficult emotions thus providing the basis for the balance between authentic autonomy and healthy social engagement” (Levine, 2010:13). Furthermore, there is a significant role for therapists working within the field of trauma-based OCD to address the client’s specific cathecting or coupling of trauma symptoms. The over/under-coupling or cathecting of the neurophysiological trauma plays out in specific muscle and body postures which are underlied by a myriad of complex internalisations and beliefs connected to psychological valences in the client. Through negotiating and gaining insight into these connections and valences, the therapist is able to guide the client to uncouple the connection to the client’s nervous system and their experience of safety in their world. It is posited here, that only then is the client able to gain a type of freedom from the fear and is able to work with separating himself from it utilising techniques found in insight-oriented, CBT and ERP therapies.

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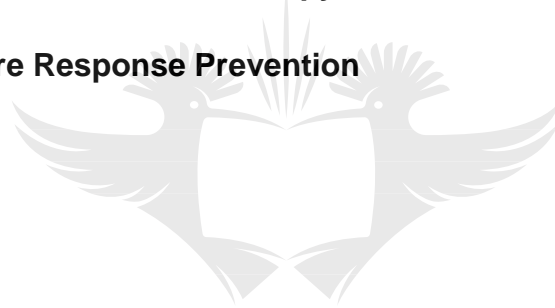
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LIST OF ABBREVIATIONS

OCD	Obsessive-compulsive disorder
SNS	Sympathetic Nervous System
PNS	Parasympathetic Nervous System
ANS	Autonomic Nervous System
CNS	Central Nervous System
SE™	Somatic Experiencing™
CBT	Cognitive behavioural therapy
ERP	Exposure Response Prevention



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CHAPTER 1

INTRODUCTION, RESEARCH PROBLEM AND MOTIVATION FOR THE STUDY

1.1 BACKGROUND OF THE PROBLEM

The proposition of this study is that there is a place in psychopathology for a category of obsessive-compulsive disorder (OCD) which is preceded and affected by trauma. This is referred to as *trauma-based OCD* in this study. Based on this argument (which is supported by research evidence), it is critical to acknowledge and grasp the effect that trauma has on the individual's neurophysiology and, subsequently, on the development or dynamic of OCD. Given the effects of trauma on neurophysiology, I have explored the position that it is necessary and valuable to include a trauma-based treatment methodology in therapy when working with clients with OCD. This study will explore the value of Somatic Experiencing (SE™) in addressing the core aspects of OCD which are linked to the neurophysiology of trauma.

The defining characteristics of OCD according to *The Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* (APA, 2013:235) published by the American Psychiatric Association (APA), are the occurrence of obsessions (repeated and unrelenting notions, feelings or images) and compulsions (habituated actions or thoughts) which cause heightened anxiety or distress; that the individual feels compelled to do the compulsions and that these are not experienced as voluntary (APA, 2013:238). These aspects will be explored in terms of the Polyvagal Theory (Porges, 2003, 2011) which presents that *neuroception* (the ability of the senses to detect safety or danger and to initiate responses in the nervous system) initiates the involuntary impulses of the sympathetic nervous system (fight or flee response) and the parasympathetic nervous system (freeze response) and that these – along with the more current evolutionary system of social engagement – form the basis of our self-protective neurobiology (Porges, 2011). As Porges clarified (2003, 2011), these are part of the vagus nerve which links the viscera, organs and muscles to the brain thereby creating – in psychological jargon – a “mind-body” connection.

It has been presented that the compulsive actions or mental acts characteristic of OCD are an attempt to reduce the experience of anxiety or distress (APA, 2013:235) and frequently a momentary feeling of relief follows the performance of the compulsion (APA, 2013:236). Numerous studies have suggested a link between “stressful life events” (SLEs), particularly trauma (TLEs), and the development of OCD symptoms (Borges, Braga, Iêgo, D’Alcante, Sidrim, Machado, Pinto, Cordioli, Do Rosário, Petribú, Mendlowicz, Mari, Miguel & Fontenelle, 2011; Cromera, Schmidt, Murph, 2007; De Silva & Marks, 1999; Lin, Katsovich, Ghebremichael, Findley, Grantz, Lombroso, King, Zhang & Leckman, 2007; Lochner, Du Toit, Zungu-Dirwayi, Marais, Van Kradenburg, Curr, Seedat, Niehaus & Stein, 2002; Rozenman, Peris, Bergman, Chang, Neill, McCracken & Piacentini, 2017). In terms of prevalence, studies are frequently small scale and conducted within specific groups such as veterans and soldiers. According to Jordan, Schlenger, Hough, Kulka, Weiss, Fairbank and Marmar (1991), OCD and post-traumatic stress disorder (PTSD) frequently co-occur with people in high war-zone areas.

Different explanations for the coexistence of OCD and PTSD have been presented. In a cognitive model. Dinn, Harris and Raynard, (1999) have posited that anxiety – which is evoked by the effects of trauma exposure – leads to the excessive labelling of stimuli as dangerous or threatening. In turn, compulsive rituals are employed to reduce the excitation. These researchers also present the case for elevated serotonin in both disorders in reaction to chronic stress and trauma; they argue that this may lead to increased serotonergic activity in the orbitofrontal metabolism which leads to excessive labelling of stimuli as threatening and, in turn, to compulsions.

A different approach presented in this study is that, combining the neurophysiological research with the assertion that OCD is frequently linked to experiences of stress or trauma, it is proposed that these compulsive or perseverative actions may well be an attempt to discharge the visceral and neurophysiological reactions to trauma. According to Porges (2011:12), psychopathology may include a person’s “inability to inhibit defence systems in a safe environment”. That is, even when there is an absence of real or actual threat in the environment, the neurophysiology continues to defend for survival as if the threat was there.

It is asserted that psychological trauma is the result of extremely stressful events that fundamentally undermine a person's sense of safety, cause heightened fear leading to a sense of helplessness, and affects how a person perceives him- or herself in the world. While the APA (2013) identifies traumatic experiences as involving a threat to survival or safety, any condition that leaves a person feeling scared and alone can be traumatic, even if it does not involve physical harm. Rothschild (2000), posits that an event will most likely lead to psychological trauma if it occurred unexpectedly, if the person felt incapable of preventing it, if it happened repeatedly, if someone was punishing intentionally, or it happened in childhood. It is important to note that trauma is experienced subjectively and that it is one's personal emotional experience of the event which leads to the experience of trauma.

The focus in this study is on the developmental stage of adolescence. According to Mathews, Kaur and Stein (2008), emotional abuse or neglect in childhood is a pertinent factor in the development of obsessive-compulsive symptoms (OCS) in childhood and adolescence.

The following diagram presents the thesis of this study: that there is a place in psychopathology for a category of OCD which is closely preceded by trauma (*trauma-based OCD*) and that a treatment methodology directly related to the neurophysiological effects of trauma may be of value in treating OCD. This study will explore the value of Somatic Experiencing (SE™) in addressing the core aspects of OCD which are linked to trauma.

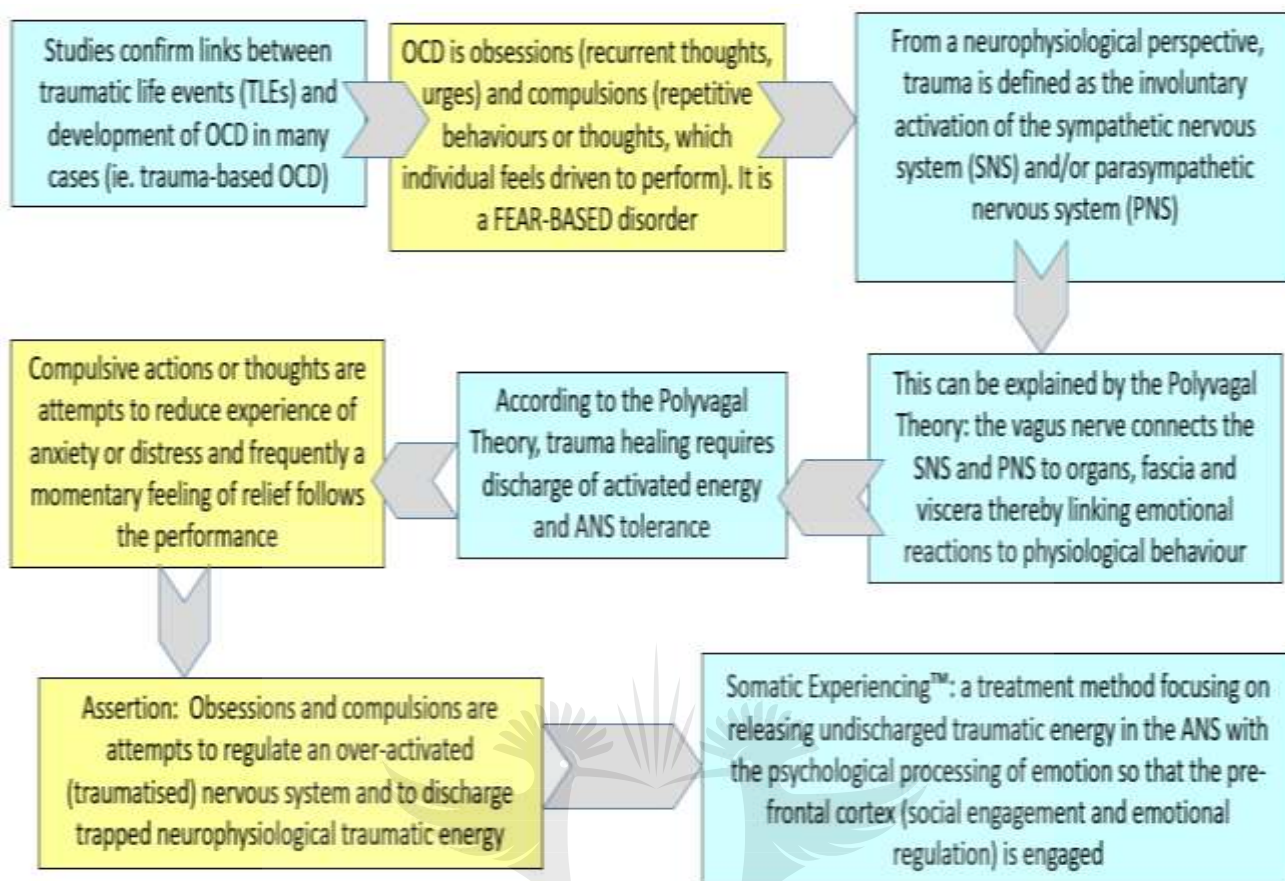


Diagram 1.1: Theoretical assertion of this study

1.2 THE NEUROPHYSIOLOGY OF TRAUMA

Numerous authors attest to the effects of trauma on neurobiology (Levine, 2010; Porges, 2003; Porges, 2011; Porges & Furman, 2011; Van der Kolk, 2014; Scaer, 1997). Peter Levine (2010) examines the physiology of trauma in humans based on the fight/flight/freeze response seen in animals. An animal faced with threat will first attempt to fight or flee; if trapped, it will become immobilised (the freeze response) which is the mimicking of death (for example, through the expression of paralysis). Although parts of the central nervous system shut down, it is relevant to this study that the autonomic nervous system is still producing high levels of activity which must be repressed at that time. It is this repressed arousal which may be transferred into perseverative behaviour characteristic of OCD. According to studies, the surviving animal will go through an automatic or non-voluntary process of discharge of this intense arousal through actions such as extensive trembling, running, shaking, sweating and breathing. According to Levine, this process of discharge allows for the

regulation of the central nervous system and, therefore, a return to a state of calm alertness. Contrary to this, Levine (2010) explains that humans who have experienced trauma will often not discharge this arousal. He illustrates this point by sharing his own experience of being knocked down by a vehicle where the automatic medical response was to physically restrain him in order to limit movement. Humans may also be acculturated to limit expression of what is perceived to be negative emotions in a public or social context and this too may account for self-induced restraint. According to Scaer (1997), this suppression of discharge results in the storing of autonomic arousal in limbic and procedural memory systems of the brain.

1.2.1 The Polyvagal Theory

The idea of visceral emotion was initiated with the discovery of the vagus nerve (Pert, 1999:136). This nerve exits the brain and extends through the autonomic nervous system to the viscera, working through the sympathetic and the parasympathetic systems which are linked to different body organs and systems. As seen in the diagram below, it sends branches to many organs including the salivary glands, the heart, the lungs, the stomach, the intestines, the bladder and more. The vagus nerve is a bidirectional conduit carrying incoming information from the senses (*neuroception* is the term used by Porges, 2011) to the nervous system to the brain, communicating what the body is sensing, and also transmitting outgoing information which directs a range of instinctual responses. The diagram below indicates which organs are part of the autonomic nervous system, and specifically which are controlled by the sympathetic (SNS) and parasympathetic nervous systems (PNS).

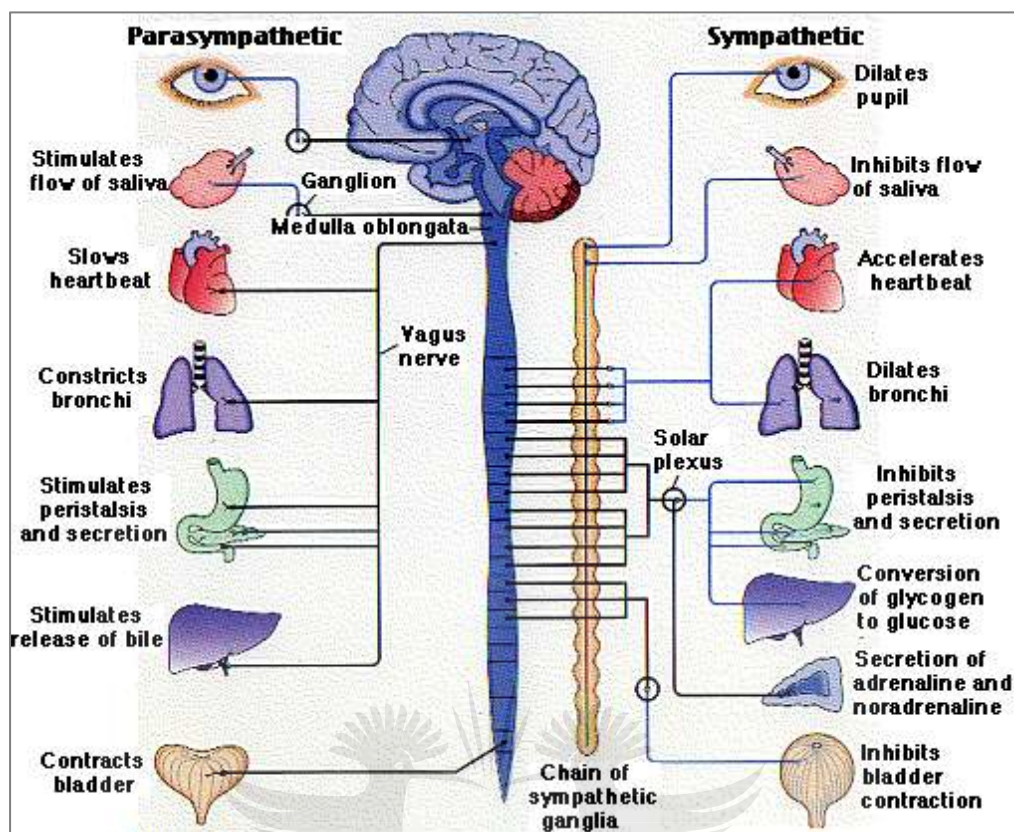


Diagram 1.2: Organs linked to the Parasympathetic and Sympathetic Nervous Systems

<http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/P/PNS.htm>

The autonomic system is the primary apparatus in control of the fight/flight response and the freeze/dissociate response (Porges, 2003). Furthermore, the system is afferent and efferent resulting in communication from organs and viscera to the brain and vice versa. The relevancy of this research is that it establishes that the central nervous system arousal (as in fight, flight or freeze) affects organs and viscera which, in turn, modifies neurological functioning and emotional states.

Porges's theory is based on an understanding of the evolutionary behaviours maintained by neural circuits (see Diagram 1.3 below), each signifying a different stage of the mammalian autonomic nervous system: "social communication" (e.g., facial expression and communication), "mobilisation" (e.g., defensive survival behaviours e.g., fight-flight) and "immobilisation" (e.g., suppression of metabolic processes leading to a type of paralysis). The evolutionary development in which these neural circuits appeared represents a response pyramid in mammals with the most

contemporary neural circuit, the social communication behaviours, responding first to anxiety-invoking situations (Porges, 2011). Furthermore, this evolutionary process causes more complex neural structures (such as the orbito-frontal cortex) to become engaged in the organising of behaviour, especially the interactive behaviours needed for socialisation with others. If this behaviour is not successful, withdrawal of this system results in mobilisation of survival defensive behaviours as well as other physiological reflexes such as heightened sympathetic galvanisation (Porges, 2011).

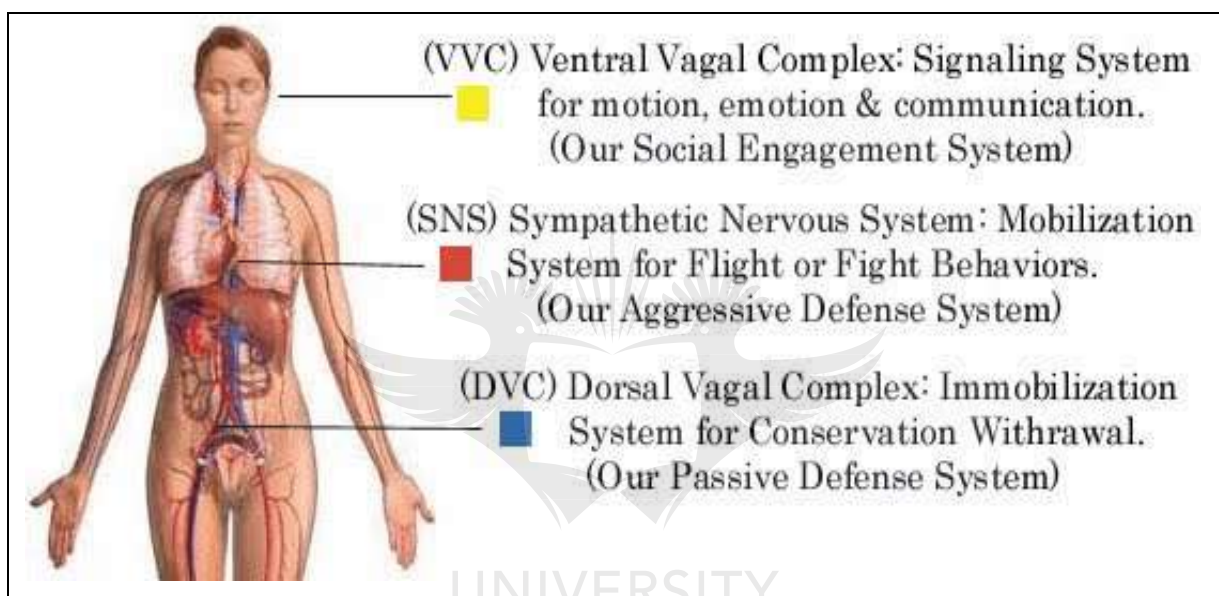


Diagram 1.3: The phylogenetic structures of the nervous system according to the Polyvagal Theory

<http://attachmentdisorderhealing.com/porges-polyvagal/>

According to the Polyvagal Theory, trauma affects the autonomic nervous system (Porges, 2003; Porges, 2011; Porges & Furman, 2011). As humans, we are programmed for social engagement, that is, to reach out to other humans and to connect through social mechanisms. However, if this ventral vagal neural system is impeded (through a non-responsive, neglectful or even abusive family or another system) then the dorsal vagal system is activated. The sympathetic nervous system is primed to defend itself through the use of fight or flight when faced with a perceived threat (that which is experienced as traumatic by the child) and the parasympathetic system is primed to freeze when fight or flight is prevented. Like fight and flight, the freeze response is a primal reflexive defence strategy generated in the face of extreme

threat (Porges, 2011). The freeze response is elicited as a last resort (Porges, 2011; Scaer, 2001). According to these authors, the arousal of the sympathetic system response precedes the freeze state and the activation of it becomes a part of this immobilised state (Levine, 2010; Scaer, 2001) due to circulating chemical activity.

The freeze state is a response to extreme threat that cannot access the mobilisation of fight or flight pathways (Scaer, 2001). According to Scaer (2001), an example of this is hypoxia, which is a severe state of energy conservation, in a life-threatening situation. Sympathetic arousal initially only allows for delivery of available oxygen to the most vital organ, the brain. Energy conservation results in diminishing the use of oxygen by less vital organs (Scaer, 2001) which ensures survival. However, Scaer emphasises that what actually happens when a person or animal is in a state of shutdown or immobilisation is that the SNS is highly activated (with chemical surges coursing through the body) but the PNS acts as a break leaving the organism stuck in both arousal and shut-down simultaneously.

A critical proviso is made in this study: it is important to note that trauma does not always mean that a person experiences a tragedy or severe abuse. In fact, research shows that failure to establish secure attachment bonds, loss of a consistent caregiver and chronically mis-attuned caregiving can result in significant internal dysregulation (Van der Kolk, 2014). This will be an important factor which, I will argue, effects how we diagnose sub-types of OCD and allows us to identify OCD resulting from more subtle types of trauma as opposed to OCD which is linked to PTSD.

Researchers have proposed that dysfunctional mental states are associated with an excessive sympathetic outflow and a deficient vagal outflow (Levin, 2010; Porges, 2011). This may throw some light on the compulsions which are a defining characteristic of OCD. OCD is linked to perseverative neurology and challenges with cognitive “set shifting” (Borges et al., 2011). It is presented here that this repetition compulsion characteristic may be linked to the thwarted biological impulse of CNS to protect or reregulate itself, albeit through the inclusion of the cerebral cortex which may link to challenges with set shifting (Borges et al., 2011) and over-thinking. Levine (SE™, Professional Training Course Material: B3.19) explains that in “traumatic coupling” there is activation (the traumatic trigger) which becomes linked to a

perceptual cue from any of the five basic senses. This “overcoupling” (over-association) or “undercoupling” (dissociation) is used to try and keep activation levels decreased or controlled. According to Levine, “overcoupling” is an over-association or binding of two or more elements which involve sensations, images, behaviour, affect or meaning in response to activation. These are in a fixated pattern or sequence. “Undercoupling”, according to Levine, is a fragmentation of elements associated with sensations, images, behaviour, affect or meaning (SIBAM) in response to activation. “undercoupling”, which is preceded by “overcoupling”, is a state with extremely elevated levels of activation and merged energy (Levine, Professional Training Course Manual: B3.20).

1.2.2 Orbito-frontal cortex, the ventromedial prefrontal cortex and the amygdala

Neuro-imaging research has identified the orbitofrontal cortex (OFC) as playing a significant role in OCD (Gottlich, M., Kramer, Kordon, Hohagen, Zurowski, 2015; Menzies, Chamberlain, Laird, Thelend, Sahakian & Bullmore, 2008; Zald & Kim, 1996). The OFC has been associated with compulsive behaviour and repetitive behaviour. Furthermore, the OFC has a particular neural circuitry relationship with the limbic and paralimbic regions (the thalamus, basal ganglia and amygdala) and the sensory systems (MacMaster, Vora, Easter, Rix & Rosenberg, 2010). According to researchers (Levine, 2010; Mataix-Cols, Cullen, Lange, Zelaya, Andrew, Amaro, Brammer, Williams, Speckens & Phillip, 2003; Menzies et al., 2008; Porges, 2011), the amygdala is implicated in the sympathetic nervous system’s fight-or-flight reaction as well as the parasympathetic nervous system’s dissociation-or-freeze response. However, a further interesting finding from structural imaging studies indicates that dysfunction in the orbitofronto-striatal circuit and associated limbic structures such as the amygdala contribute to the development of OCD. According to Menzies et al. (2008), the data suggests that: “(i) this circuit shows elevated metabolism in patients with OCD, particularly associated with expression of OCD symptoms and anxiety ..., (ii) the OFC is consistently reduced in volume in OCD and (iii) that activation abnormalities are observed in these regions during fMRI in OCD patients compared with controls ... The causal relationship between these structural and functional

observations is unknown, but interestingly functional brain changes have been shown to be dynamic and may normalise following therapeutic approaches which also reduce OCD symptoms and anxiety” (p. 541).

1.3 THE ROLE OF TRAUMA IN OCD

As delineated above, this study posits that there is a place in psychopathology for *trauma-based OCD*. This is the case when OCD develops after the experience of trauma. In such instances it is viewed as critical to identify the effect that trauma has on the individual's neurophysiology. In addressing and dealing with these effects in therapy, the client is able to resolve the effects of trauma on their neurophysiology which, in turn, effects the amelioration of pathological obsessions and compulsions.

In terms of trauma-based OCD, an interaction between life events, genes and personality tendencies are believed to influence the onset and course of OCD (Cromera et al., 2007; Lochner et al., (2002). Numerous studies have suggested a link between stressful life events (SLEs), including trauma, and the development of OCD symptoms (Borges et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999; De Silva & Marks, 2001; Lin et al., 2007; Lochner et al., 2002; Mathews et al., 2008). In some studies, people with OCD reported increased occurrence and seriousness of life events (including critical illness and distressing experiences) prior to the inception of compulsions, with a peak at one month before beginning (Cromera et al., 2007; Fontenelle, Cocchi, Harrison, Shavitt, Do Rosário, Ferrão, De Mathis, Cordioli, Yücel, Pantelis, De Jesus Mari, Miguel & Torres, 2012).

Most critical, for the thesis of this study, is the theoretical perspective which is supported by neurobiological research (Porges, 2011) which identifies the binding of physiological survival energy with environmental triggers to produce maladaptive behaviours. A study by McGuire, Small, Lewin, Murphy, De Nadai, Phares, Geffken and Storch, (2013), identifies levels of dysregulation (the ability to regulate emotions and behaviours) in youth with OCD as being reflective of increased impairment on day-to-day activities and impeding their performance across domains requiring stable functioning such as school and relationships with peers.

The proposition underlying this study is that the trajectory from manifest anxiety to OCD is frequently misdiagnosed because of the misunderstanding of the effects of subtle chronic stress which can then be triggered into full-blown OCD. Van der Kolk (2004, 2014) has argued for the inclusion of *Developmental Trauma Disorder* into the DSM-5 as a means of recognising the effects that chronic trauma – which frequently goes undiagnosed – can have on the child or adult. As will be explored in this study, the proposition is that there is a need to go beyond the putative divisions as represented in the DSM-5 (APA, 2013). In DSM-5, disorders which are influenced by stressful and traumatic events are included in the diagnostic category “Trauma and Stress-Related Disorders” within the categories of PTSD or Adjustment Disorders. These disorders identify exposure to a threatened or serious injury or event as a diagnostic criterion (APA, 2013:265). Van der Kolk (2004) has been arguing for a more subtle etiological form of chronic trauma, occurring in critical developmental periods, which result in deficits in emotional self-regulation, lowered resistance (physiological and psychological) and impaired resilience which predispose the child to increased risk of psychopathology (Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2004, Van der Kolk, 2014). He argues that “the diagnosis of PTSD is not developmentally sensitive and does not adequately describe the impact of exposure to childhood trauma on the developing child” (Van der Kolk, 2004:8). He cites research which shows that many studies of traumatised children indicate underlying difficulties with uncontrolled aggression, attentional and dissociative symptoms and difficulty with relationships with caregivers, peers and, eventually, partners (Van der Kolk, 2005b). He presents the argument that children are given a range of “comorbid” diagnoses, which frequently do not acknowledge the role of preceding trauma and do not adequately address the underlying cause and direct clinicians to appropriate interventions (Van der Kolk, 2005a).

Research indicates that at least half of all adults with OCD experience emotional symptoms of the disorder during their childhood (Briggs & Price, 2009; Cromera et al., 2007; Dykshoorn, 2014). Although symptoms vary, in general, there are extreme fear-based beliefs in response to specific (often seemingly innocuous) stimuli or thoughts and the use of rituals or compulsions in order to attempt to banish the thoughts. The

escalation in anxiety is so intense that the child feels like he or she must perform the action or thought in order to neutralise the fear. This is done over and over again, to the point where it interferes with everyday life. The behaviour usually decreases the anxiety momentarily but only temporarily. In the long run, the actions worsen OCD fears and stimulate the obsessions to return (Cromera et al., 2007).

Based on these findings, there is a thesis that, when OCD develops after a traumatic event an etiologically distinct subtype of OCD may exist (Sasson, Dekel, Nacasch, Chopra, Zinger, Amital & Zohar, 2005; Storch, Heidgerken, Adkins, Cole, Murphy & Geffken, 2005; Rozenman et. al., 2017). Storch et al. (2005) reported the case of an adolescent who developed OCD after peer victimisation; this also affected the link between the severity of OCD and resulting depression, externalising behaviours, and loneliness in another sample of children and adolescents with OCD. Toro, Cervera, Osejo and Salamero (1992) reported that for 53% of individuals diagnosed with OCD, traumatic situations preceded onset of the disorder.

1.4 PSYCHOTHERAPEUTIC TREATMENT APPROACHES

Very often the first line of treatment for OCD is Cognitive-Behavioural Therapy (CBT – which aims to address cognitive symptoms such as uncontrollable worry, physical symptoms such as vigilance and restlessness, and behaviour symptoms such as excessive preparation and avoidance). Exposure and Response Prevention is very often another line of treatment (which aims to expose the person to the dreaded stimulus in a planned manner so that the client is increasingly able to manage negative feelings and autonomic arousal symptoms that accompany the images) (Foa, Keane, Friedman & Cohen, 2009; Nestadt, Addington, Samuels, Liang, Binevenu, Riddle, Grados, Hoehn-Saric & Bernadette, 2003). CBT techniques frequently support ERP by assisting the client to confront catastrophising or distorted thought patterns or mistaken beliefs (Foa et al., 2009; Nestadt et al., 2003.; Toro et al., 1992). Yet, there are a number of studies which report clients who experience “treatment-resistant OCD” after these methods have been applied (Dykshoorn, 2014; Semiz, Inanc & Bezgin, 2014). In practice, I have observed that ERP and CBT are frequently implemented as a matter of course in treating clients presenting with symptoms of

OCD. However, it is also my experience that, where treatment does not identify and address the role of preceding trauma, then CBT and ERP may be – at best - an inadequate treatment methodology and – at worst – re-traumatising for the client. Secondary symptoms of OCD may respond to CBT and ERP; however, a trigger may regress the client to the original trauma. This is also noted in research (Van Ameringen, Patterson & Simpson, 2014).

Numerous studies support the understanding that trauma can complicate the treatment of OCD and have practical implications for the course of treatment (De Silva & Marks, 1999; Lochner et al., 2002; Speckens, Hackmann, Ehlers & Cuthbert, 2007). OCD has been linked to certain types of stressful events, such as increased responsibility or traumatic losses (Rasmussen & Tsuang, 1986), as well as to the number of stressful events over the preceding year before OCD onset (De Silva & Marks, 2001; Rasmussen & Tsuang, 1986; Toro et al., 1992).

A mounting body of research suggests a role for past traumas or historical post-traumatic stress disorder (PTSD) in the development of OCD (De Silva & Marks, 1999; Dykshoorn, 2014; Gershuny, Baer, Jenike, Minichiello & Wilhelm, 2002; Gershuny, Baer, Radomsky, Wilson & Jenike, 2003; Pitman, 1993; Sasson et al., 2005; Semiz et al., 2014; Speckens et al., 2007). The DSM-5 (APA, 2013:5) states in the Introduction that “the boundaries between many disorder categories are more fluid over the lifetime ... and many symptoms assigned to a single disorder may occur, at varying levels of severity, in many other disorders”. Clinical studies demonstrated that in individuals with intractable OCD and a previous diagnosis of PTSD led to poorer treatment outcome (i.e., no change or a worsening of symptoms) than for those without comorbid PTSD (Semiz et al., 2014). This may relate to the DSM-5 point that classifications should allow for dimensional approaches to mental disorders. This thesis postulates that childhood trauma (what is experienced as traumatising for the child which may include attachment trauma) may be a significant factor underlying the onset of childhood and adolescent OCD. When this is so, this needs to form a main focus in treatment in conjunction with other treatment approaches in order to resolve obsessive compulsive thoughts and behaviour.

The placement of the DSM-5 chapter on Obsessive Compulsive and Related Disorders (OCDs) underscores the concept of the dimensional approach – by separating OCDs into its own chapter (in distinction to the DSM-IV chapter where it was subsumed under Anxiety), it emphasises some distinct characteristics while allowing for important phenomenological and psychobiological overlaps between OCD and the anxiety disorders on the one hand, and OCD and trauma disorders on the other (Van Ameringen et al., 2014; Nemeroff, Weinberger, Rutter, MacMillan, Bryant, Wessely, Stein, Pariente, Seemüller, Berk, Malhi, Preisig, Brüne & Lysaker, 2013).

1.4.1 Somatic Experiencing™ as a treatment methodology for trauma-linked OCD

The theory behind somatic therapies is that trauma symptoms are the effects of instability of the autonomic nervous system (ANS). Neuro-scientific research shows that traumatic events are physically stored in the human body: all mammals are physically programmed through their sympathetic and parasympathetic nervous system to escape, attack, or collapse in the face of serious dangers. According to Peter Levine (2010), when the mammalian nervous system becomes threatened by an unexpected threat stimulus, the body will automatically take one of these steps to regulate the nervous system as the organism goes into survival mode. The autonomic nervous system is responsible for this self-regulation, acting as a control system and prompting the body to return to normalcy. Trauma, argues Levine, is “locked” in the chemical pathways of the body and, therefore, it is in the body that it must be identified and healed. Studies in neurobiology show that in humans, when these natural responses to threat are prevented and people are powerless to prevent their own traumatisation, the unfinished defensive actions become stored as undischarged energy in their nervous systems. They remain physiologically frozen in an incomplete state of high biological readiness to react to the traumatic event, even long after the event has passed. The undischarged energy of the blocked response to the trauma can develop into PTSD symptoms (Levine, 2010). When faced with a crisis which is experienced as traumatic, the mammalian nervous system is primed to develop a motor plan for escape through the sympathetic nervous system (SNS). If that outlet is thwarted, the parasympathetic system is activated and the nervous system goes into

freeze. However, the systemic energy and hormonal surge is still in arousal and is, in fact, trapped in the body and requires release. Release may come through repetition compulsion. The treatment methodology of Somatic Experiencing (SE™) focuses on resolving the symptoms of chronic stress and post-traumatic stress. While cognitive therapies utilise a top-down approach (i.e. starting with the thoughts), SE™ utilises bottom-up processing by guiding the client's awareness to physiological phenomena, both on a sensory and musculo-skeletal level, rather than focusing primarily on reasoning or feelings (Payne, Levine and Crane-Godrea, 2015).

The focus of this study will be the assumption that the use of SE™ may be a helpful treatment methodology to include when treating trauma-based OCD. SE™ is a form of trauma therapy that focuses the client's attention on the internal sensations of trauma, on the ways in which the triggering events are linked to neurophysiological states of fear and, ultimately, on the uncoupling of these factors. According to Payne, Levine and Crane-Godreau (2015), SE™ explores the bodily based protective reactions which include visceral (interoceptive) and musculo-skeletal (kinaesthetic and proprioceptive) reactions so that attention to physical activation can support the resolution of symptoms resulting from traumatic stress. In distinction to treatment approaches such as CBT and ERP, SE™ avoids immediate elicitation of traumatic memories, and facilitates the gradual release of traumatic energy stored in the ANS while creating corrective interoceptive experiences that physically counterweigh those of immobility and helplessness. Interestingly, if trauma does play a significant role in the development of OCD then the exposure methodology characteristic of ERP therapy may in fact be re-traumatising for the client if done too soon and before physiological protective reactions are addressed.

A study was found which examined "dysregulation" (challenges regulating emotional and cognitive factors) in youth (McGuire et al., 2013). Dysregulation severity predicted treatment discontinuation according to the study. The authors suggest that high levels of dysregulation undermined the ability of the youth to manage the distress resulting from the exposure of ERP CBT. SE™ as a treatment methodology prioritises pendulation (moving towards and away from the distressing stimulus or traumatic thoughts and physiological dysregulation) and titration (ascertaining the amount of

dysregulation the client can manage through small additions of movements towards the distressing stimulus). Utilising these techniques and others, the amount of distress is carefully calibrated so that neurophysiological regulation is always monitored, managed and reinstated.

Through involvement *in situ*, I have become aware of the value of SE™ for the treatment of trauma. I have also found SE™ to be of value in a case of an adolescent female with OCD through its assistance with addressing physiological signs and experiences of trauma (such as sweaty palms, racing heart rate, a need to run) which are linked to her compulsions. The strength of the physiological reactions, as reflected in the research of Peter Levine and reinforced by the Polyvagal model, results in her not being able to utilise the CBT methods in the moment and in experiencing the ERP methods as re-traumatising.

Although there is research exploring the relationship between trauma and OCD and dysregulation and OCD, no study was found which bases a treatment response on this close association. In light of a specific experience with an adolescent where CBT and ERP were only minimally successful in reducing some of the compulsive behaviours and obsessive thoughts, the trauma trigger appeared to remain intact on a sensory or neuroceptive level. This study will explore the possible benefits of Somatic Experiencing™ therapy in addressing the underlying visceral trauma symptoms for adolescents with OCD.

1.5 STATEMENT OF THE PROBLEM

According to the DSM-5 (APA, 2013:235), OCD is characterised by the presence of obsessions and/or compulsions. In the case of an adolescent with OCD, in which I have been extensively involved, there is a pronounced element of preceding trauma and, the OCD has been resistant to CBT and ERP treatment. There are studies that show that OCD does not always respond favourably to CBT and/or ERP (McGuire et al., 2013; Stewart, 2010). The question is posed as to whether trauma adds an additional dimension to the treatment of OCD in paediatric and adolescent OCD. There is evidence to indicate that fear-based OCD may be a distinct category (Rozenman et al., 2017). According to neurobiological studies and theories (Levine, 2010; Porges &

Furman, 2003; Porges, 2011), trauma has a specific physiological response affecting the sympathetic and parasympathetic nervous systems. According to Levine (2010), traumatised humans would be driven to discharge the trapped fight-flight-or-freeze energy, and in this way to regulate their autonomic nervous system. However, this response often gets aborted, leaving people stuck with energy that is not expelled with the result of the repeated attempt to release the neurophysiological energy. This raises the interesting question of whether the effects of trauma on a physiological level (fight, flight or freeze) are somehow linked to the repetition compulsion characteristic of OCD.

Therefore, the problem statement is: when trauma precedes the development of obsessive-compulsive disorder (OCD), to what extent is trauma “trapped” in the neurophysiology of the client and does a trauma-based treatment method, such as Somatic Experiencing™, assist in resolving the obsessions and compulsions?

The developmental features of adolescence are of particular interest to the area of educational psychology. There is no research found which addresses this specific treatment methodology in relation to OCD and there is a need to explore evidence-based practice treatment approaches (Rozeman et al., 2017) for trauma-based OCD.

1.6 RESEARCH QUESTIONS

- 1 How does Somatic Experiencing™ assist in alleviating or resolving the experience and effects of trauma as experienced by the child or adolescent?
- 2 What is the personal experience by the participants of SE™ as a treatment approach for OCD?
- 3 What are the recommendations for therapists who have clients who present with OCD?

1.7 RESEARCH AIMS

The aim of this study is to explore whether the treatment approach of SE™ is helpful by itself or as part of a cluster of treatment approaches in addressing trauma-based OCD in adolescents. OCD is linked to distress, anxiety and fear and the compulsions

are an attempt to decrease or reduce these feelings. It is presented here that, when trauma is experienced prior to the development of OCD, trauma-based OCD may be borne out of an attempt to manage or diminish the effects of the trauma or fear. SE™ was identified as a somatic-based therapy which is effective in addressing the neurophysiology of trauma and, therefore, was viewed as assisting significantly in the treatment of trauma-based OCD.

The significance of the present study should be viewed within the context of how extremely debilitating the effects of OCD can be on a child or adolescent's everyday functioning and emotional/psychological development. The contributions, it is hoped, will be to increase insight into a trauma-based category of OCD, the treatment options available for specific types of OCD and to ameliorate or eliminate the somatisation of trauma which may underlie the obsessive thoughts and compulsive behaviours of OCD. It is hoped that the findings of this study will assist in reducing or eliminating the intransigence and ongoing effects of trauma-based OCD on the client's functioning in adolescence and adulthood.

Any similar study exploring the efficacy of SE™ for OCD has not been found in a broad academic search.

1.8 RESEARCH METHODOLOGY

In line with Merriam and Tisdell's (2016:1) presentation of qualitative research, this study is well situated in the context of "applied social sciences or fields of practice" in that, in practice, OCD symptoms may respond to other treatment methods which may not yet have been explored. I have become aware of the value of SE™ for the treatment of trauma and its role in assisting the client to calm their physiological responses (such as sweaty palms, racing heart rate) which may be inked to compulsions.

The philosophical or ontological underpinnings of this study arise from the lens of the bioecological model and social constructivism. The former acknowledges that a child's development is dependent on the interaction between the person and the environment within time (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2007). Bronfenbrenner

(2005) identifies numerous spheres or systems of influence – proximal and distal – which affect and influence the developing child or biopsychosocial organism. Bronfenbrenner emphasises that these interactions are bi-directional or reflexive, that is, acting upon and changing each other. They are influenced by the individual's unique disposition, resources and resilience. In light of this approach, it can be argued that multiple factors contribute to the development of OCD in the individual including genetic influences, socio-economic factors, family structures and relationships, individual and family temperaments and modes of interaction, financial realities and economic stressors, the personality and temperament of the child, educational and social experiences, emotional support for the child, experiences of trauma, intellectual functioning and cognitive ability.

A second theoretical lens which I will use to approach this topic is provided by the social constructivist paradigm which views knowledge as constructed by individuals and groups (Gergen, 1985). Both theories acknowledge that stimuli or influences are not simply used by the individual, nor do they happen in a straightforward or linear manner. Generally speaking, social constructivism posits that what is understood by people is strongly influenced by systems of understanding rather than an individual operating as an isolated “psychological” entity. Gergen (1985:273) called these “communities of shared intelligibility”. In other words, what is known derives from a “consensual” process that is linked to the tradition and mores which underpin the culture within which “consensualising” takes place.

Another trajectory from this point is that, according to Galbin (2014), prevailing knowledge or social phenomenon essentially develops according to personal ‘realities’ which are implicitly imbued with or constructed from subjective perceptions and agendas. These repeatedly expounded ideas are presented as empirically self-evident and may then become accepted as ‘Truths’ or ‘Reality’. In this sense all constructs or knowledge exert an element of control over how reality is viewed or interpreted (Andrews, 2012). Therefore, according to Galbin (2014), the constructivist view motivates for a reflexive stance in the dominant knowledge field, and raises questions of traditional practices which dominate knowledge production in society and their cultural implications (Galbin, 2014). The construct of trauma within the prevailing

confines of the DSM-5 will be explored in an attempt to go beyond how OCD is represented within the 'mainstream' medical model and to elucidate possible alternatives. For example, Van der Kolk (n.d.) has long argued for a shift in how trauma is viewed and has presented the construct of Developmental Trauma Disorder:

The traumatic stress field has adopted the term Complex Trauma to describe the experience of multiple and/or chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (e.g., sexual or physical abuse, war, community violence) and early-life onset. (Van der Kolk, nd:2).

Van der Kolk (nd) states that DSM IV Field Trials found that trauma has its most long-term impact during the first decade of life and that the diagnosis PTSD does not adequately describe the impact of exposure to childhood trauma on the developing child. In terms of the intimate individual experience, Tilsen and McNamee (2015) present an interesting view of social construction as evidence-based practice within the context of therapy:

When we view therapy as social construction, we are not particularly interested in predetermining what sort of interactions will produce transformation. We are more concerned with adopting a relationally engaged stance with clients. (Tilsen & McNamee, 2015:127).

Precisely because there are many factors, with varying influences, valence and consequences, a qualitative study which explores the specific factors on an individual basis is viewed as instructive at this point. An interpretive orientation identifies the qualitative research model as exploring the meaning that people construct from their experiences (Denzin and Lincoln, 2013:6; Merriam & Tisdell, 2016:15). In line with this and appropriate to this study is the need for inductive reasoning in such a study in order to gather data to gain increased insight into phenomenon and to examine the value and efficacy of a treatment methodology.

The most appropriate research design for this study is viewed as being the qualitative case study. This study requires an in-depth account and exploration of the bounded system (Merriam & Tisdall, 2016:37), that is, of the adolescent who has experienced trauma and has subsequently developed OCD. Yin (2014:15) elucidates that a case study is empirical research of a phenomenon in a real-life context whereas an experiment isolates the former from the latter as much as possible and controls for the influence of only a limited number of variables (Yin, 2014). Furthermore, a case study is appropriate when the boundaries between phenomenon (OCD in adolescence) and context (types and role of trauma) may not be clear. The case study is able to include multiple sources of evidence which allow for triangulation of evidence (Yin, 2014). Finally, and of central importance for this study, the preceding development of theoretical ideas guides collection and analysis of information (Yin, 2014).

According to Yin's identification of basic types of case study designs (2014), case studies should always include an analysis of multiple related factors in relation to the case or subject. Over and above this, case study typologies are constituted according to the following criteria (Baxter & Jack, 2008): In the exploratory case study, the focus is usually a single case or a small number of cases. The goal is to gain increased understanding of an incipient or unknown occurrence and to identify novel theoretical understandings to produce original suggestions and theories. This is largely valuable when prevailing theories are inadequate or have not yet been applied to the phenomenon. In the explanatory case study, the goal is to attempt to define a causal relationship. In a descriptive case study, the goal is to describe an occurrence with greater precision. The confirmatory case study is used to assess the strength or the weakness of a clearly defined theory.

According to Yin (2014), the single phenomenological case study design is applicable when the case fulfils one of these criteria: it is necessary to investigate a particular hypothesis with identified premises; it explains an unusual case; it illustrates a situation; it explains a situation; or it is long-term.

In this study, I argue that an exploratory single case study is viewed as appropriate and valuable as it provides the rich exploration to inform the analysis of findings and applicability of theory as described above.

1.8.1 Sampling

Nonprobability or purposive sampling is viewed as appropriate for this study as the goal is to explore and discover an in-depth understanding of specific cases which fit definite criteria such as adolescents with OCD with preceding trauma (Creswell, 2013; Merriam & Tisdall, 2016). It would be necessary to utilise the “unique” sample type given the distinctive profile of adolescents or young adults with OCD where trauma precedes the onset of OCD. With regards to sample size, given the vast amount of variability in cases with regards to preceding Traumatic or Stressful Life Events (TLEs and SLEs), dimensions of anxiety or other psychiatric disorders, it is argued that Lincoln and Guba’s (1985) point of saturation or redundancy is not relevant to this study.

In order to identify a case of a client with OCD which fitted the criteria of this study, contact was made with various professionals including psychologists and psychiatrists. Once ethical clearance and other requirements were met, the author sent out a letter describing this study to the professionals. The letter invited relevant professionals to recommend this study to clients whom they thought might be interested in learning more about this study or whom they felt would benefit from participating in this study. Selection criteria were based on the participants who most closely fitted the criteria (i.e. adolescence, OCD, preceding trauma).

1.8.1 Data Collection

1.8.1.1 In-depth interview

Data collection was based on extensive interviewing with the client and the relevant family members and practitioners in order to establish the preceding TLEs and SLEs experienced by the client and the interpretation of the effects of these on functioning, anxiety levels and OCD.

Partially structured, detailed interviews allow for change and responsiveness for authentic and unknown factors which may come up, which a researcher can then further explore while ensuring that specific factors are included. As Yin (2014) emphasises, “how” and “why” questions are most appropriate to case research. The approach aspires to studying or describing particular stimuli or themes in terms of the internal or psychological lens so that the information is clarified by the concepts and theories; on the other hand, it acknowledges that it is necessary and instructive to study particular phenomena or stimuli in a way that is general, non-structural, and objective in its perspective in order to develop higher level theories and insights.

Questions were designed to explore aspects such as how trauma was first experienced by the client (such as earliest age of experience of trauma, precipitating events such as divorce, support structures etc.), the elements and themes which need to be or became identified as relevant from those experiences (such as feeling scared while hearing parents fighting, a sense of helplessness or fear of something etc.), the gradual signs of emergence of OCD (very often there are subtle precursors such as relatively mild concern with cleanliness such as handwashing, which then burgeons eventually into full-blown OCD).

As Yin (2014) highlights, the strengths of the interview is the ability to directly focus on the case study topic and to explore relevant perceptions, attitudes and meanings from the client. However, one of the weaknesses of this source of evidence is bias on the part of the researcher, therefore an attempt will be made to strengthen this through journalling, reflection and ongoing supervision. Insight and meaning on the part of the client are central to this study in order to ascertain the role of trauma and the effects of anxiety on OCD, and the value of the treatment methodology. In this study, the interview will be used to capture the client’s “own sense of reality” (Yin, 2014).

1.8.2 Therapy sessions

I utilized retrospective observations of taped therapy sessions. Sessions were conducted over some length of time and it is believed that there was sufficient breadth

and depth revealed through this process in order to apply retrospective analysis to the sessions. Yin (2011) presents the validity of fewer cases where depth of data collection is the goal.

Video filming of each session was undertaken. Ethical considerations were thoroughly adhered to with regards to filming (i.e. written and signed consent from parents and client, with therapist ensuring full understanding of the role and purpose of such filming). As I, the therapist, was fully engaged in the process work with the client, the film ensured that I could undertake a thorough writing up of each session retroactively. The session films were viewed as a vital source for the research study and for methodological supervision.

1.8.3 Journalling and reflection

Reflexivity enables the researcher to explicitly identify the potential influence of her bias (Thompson, 2004). It is proposed that there must be systematic and authentic examination of personal and methodological issues which were explored in supervision. According to Arber (2006), reflexivity on the part of the researcher is critical to enhance the credibility of a study. Introspection is the ability to think about one's actions and choices during the entire study and data analysis process and to view the positions and beliefs we hold in the same way that we view those of others (Arber, 2006). Jordan (2001) puts it succinctly when he speaks about the "witness self" as a developmental process:

Instead of being had by one's habitual behavioural patterns, emotions, desires and thoughts, a sophisticated level of self-awareness means that there is a locus of witnessing in consciousness that can make the behaviours, emotions, desires and thoughts into objects of attention (Jordan, 2001:2).

1.9 DATA ANALYSIS

The methodology of Interpretive Phenomenological Analysis (IPA) will be used to analyse the transcribed data. The primary goal of IPA is to investigate how individuals make sense of their experiences. IPA posits that people are actively engaged in interpreting the events, objects, and people in their lives. According to Pietkiewicz and Smith (2014) and Smith (2004), IPA draws upon the fundamental principles of phenomenology (the study of subjective experience) and idiography (the study or explication of individual cases or events) in order to uncover evidence of the participant's interpretation of the phenomena under investigation and to explicitly identify the researcher's inferences. This results in a rich and detailed examination of certain phenomena; comparing studies on a particular problem may provide insights into patterns or themes (Pietkiewicz & Smith, 2014).

It is felt that the most thorough approach for this study will be, firstly, to transcribe each of the filmed interviews and treatment sessions in a linear fashion. Once this is done, an in-depth analysis of the sessions will be undertaken with the identification of emergent themes. This stage involves close reading of the transcripts a number of times as well as discussion with supervisors to verify themes. According to Pietkiewicz and Smith, (2014):

The researcher aims to formulate a concise phrase at a slightly higher level of abstraction which may refer to a more psychological conceptualization. Nevertheless, this is still grounded in the particular detail of the participant's account (Pietkiewicz & Smith, 2014:12).

This will be done for each case study and necessary clarifications or explorations can then be brought back to the participant. Documents, questionnaires and journal data will be analysed and utilised where valid for triangulation purposes.

The next stage involves looking for conceptual similarities so that connections between emerging patterns or ideas can be identified. These are then provided with a descriptive label. This thorough analysis leads to writing up a thematic account of

the study. Each theme is described and illustrated or explained with extracts from the sessions, followed by rational comments from the author (Pietkiewicz and Smith, 2014).

1.10 RESEARCH QUALITY

1.10.1 Ethical considerations

Keogh and Daly (2009) discuss the requirement to tread extremely ethically when including people with psychiatric problems in studies due to the inherent vulnerability of this group of people. A suitable process from their study is included below (Diagram 1.4) and highlights key areas of attention when aiming to prioritise a thorough approach to informed consent. A major means of achieving this is to be candid and honest about the research process. Houghton, Casey, Shaw and Murphy (2010:15–16) present the argument that “informed process consent” prioritises the negotiation and revision of arrangements throughout the course of the research study. Houghton et al. (2010) and Wassenaar (2006) also emphasise the need for participants to play a collaborative role in the decisions regarding their participation and the right of the participant to withdraw from the study at any time.

For this specific study, psychologists and psychiatrists were contacted in order to determine if they would be willing to present this study to appropriate clients who would then be free to choose to be involved with it. As Mander (1992), cited in Keogh and Daly (2009), argues, a gatekeeper acts as a middle-person between the researcher and participants and “contributes to the ethical integrity of a study by ensuring that no excessive demands are placed on potential participants”. It is imperative for the researcher to provide thorough information about the background, significance, methodology and inclusion/exclusion criteria to be used in the study (Woods and Roberts, 2003, cited in Keogh and Daly, 2009) as well as potential ethical implications associated with the research and the mechanisms that have been put in place to ensure that participants are protected.

- Using a professional researcher/gatekeeper to make judgements in relation to each individual's capacity to consent
- Allowing the potential participant sufficient time to read information and to make the decision to participate
- Encouraging the potential participant to ask questions or seek clarification
- Asking the participant to verbalize their understanding of the research and their role in the research if they decide to take part
- Supplementing verbal information with appropriate written information
- Using a process approach to informed consent, including ongoing assessment of participant understanding, continuous information giving, repeatedly seeking permission and evaluating participant willingness to continue involvement
- Reiterating the voluntary nature of the research and the potential participant's freedom to withdraw without incurring any penalties

Diagram 1.4: Strategies to facilitate informed consent (Keogh & Daly, 2009:280)

This is a potentially challenging study in terms of participant consent and confidentiality, parent/guardian involvement and consent, and the boundaries between the two. There is a critical need to be open and honest with the parent/guardian and participant, and yet confidentiality with the client (child or adolescent) is of paramount importance. Because of this complexity, it is important to gain buy-in for the entire therapeutic process from the parent/guardian so that support can be given to him/her where possible. This may entail supporting the parent/guardian to understand the psychological, physiological and emotional processes that the child/adolescent participant will be experiencing. It is crucial to prioritise the principles of beneficence and non-maleficence and to calculate the risk-benefit ratio of the research (Ramcharan & Cutcliffe, 2001; Wassenaar, 2006). Ramcharan & Cutcliffe (2001) present the case of the "ethics as process model" as a bridge between health research and social care research. According to this view, the researcher has an obligation to predict the possible effects of an intervention and to weigh the benefits and the potential harm; the researcher must be prepared to end the intervention if the latter outweighs the former. In the case of the client with OCD and trauma, it was highly probable that there would be experiences of distress during the therapy sessions. The critical responsibility for the therapist would be to be in careful control of the process with an ability to implement treatment pendulation (an oscillatory motion between opposite positions of trauma and safety) and careful titration (the process of managing the strength or intensity of a feeling or exposure to traumatic memory in carefully

measured amounts) so that the client can manage the exposure to the feared trigger and build resilience and capacity in order to manage the feelings. In essence, it is important that the researcher heeds the impact of the research on the participant and should be able to implement constructive safeguards to minimise these risks (Wassenaar, 2006).

Finally, the ethics committee of the university must be satisfied with all the ethical processes and procedures in this study. Ongoing close supervision and guidance was necessary throughout.

1.10.2 Trustworthiness

Guba (1981) proposes four criteria of trustworthiness which are truth value, applicability, consistency and neutrality. In terms of truth value, Lincoln and Guba (1985) propose that this criterion reflects how much the researcher believes in the veracity and integrity of the outcomes of the study. Truth value can first and foremost be explored through the participant's close involvement in interpretations and diagnosis. This will involve educating the client to understand the various definitions and aspects of their presenting symptoms and engaging in a process of arriving at an agreed understanding of the criteria and treatment effects (Thompson 2004). This aspect supports the issue of "groundedness" i.e. ensuring that the findings are based in the findings rather than the researcher's objectives (Strauss & Corbin 1990). Another way to ensure truth value is through peer or supervisory analysis whereby the findings are reviewed by another practitioner familiar with the phenomenon (Thompson 2004). For this study, video-recording of sessions (with explicit signed participant consent and parent/guardian signed consent) and analysis of coding, categories, themes and links to theory were supported through an external psychologist/supervisor with an expertise in SE.

Another strategy to address truth value that assists in the assessment of the integrity of the researcher within the context of the credibility of the study is the concept of reflexivity (Arber, 2006). It is proposed that there must be systematic and authentic examination of personal and methodological issues which should be further explored

in supervision. Jordan (2001) puts it succinctly when he speaks about the “witness self” as a developmental process:

Instead of being had by one’s habitual behavioural patterns, emotions, desires and thoughts, a sophisticated level of self-awareness means that there is a locus of witnessing in consciousness that can make the behaviours, emotions, desires and thoughts into objects of attention (Jordan, 2001:2).

A final important strategy to assess the truth value of the study is that of triangulation (Thompson 2004; Yin, 2011; Yin, 2014). Through triangulation, multiple sources of data are used, thus enhancing the credibility of the strategy (Yin, 2014). Such sources of data include analysis of related documents and interviews.

Applicability (Lincoln and Guba, 1985) refers to the degree to which findings can be applied to other contexts or groups. Many theorists argue that focusing on one particular case in a particular setting makes the research findings inherently difficult to apply to a wider population. It is widely agreed that such findings cannot be applied easily to a broader research population (Yin 2011, 2014), but that they are widely applicable to the generation of theories. Yin (2014) posits that case studies:

are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study [...] does not represent a ‘sample’, and in doing a case study, your goal will be to generalize theories (analytical generalization) and not to enumerate frequencies (statistical generalization) (Yin, 2014:10).

In addition to this, Yin (2014) believes that focusing on a small sample results in the generation of “deep data”.

Consistency is the third criterion of trustworthiness and applies to the stability of data (Yin, 2014) if the study were to be replicated. Guba (1981) argues that degrees of difference must be expected because of the naturalistic nature of qualitative research. Consequently, Guba (1981) presents the idea of “dependability of data” which is

assessed through the use of an audit trail (Guba 1981). An audit trail is a collection of the records and a description of the research steps taken throughout the entire process of the research project. These include:

- raw data (such as therapy notes and historical documents);
 - products of analysis (such as analyses of information and condensed notes; identified themes and categories; findings and conclusions);
 - process notes (such as methodological notes around procedures, designs, strategies; trustworthiness notes relating to supervision and confirmability of audit trail notes);
 - materials relating to intentions and dispositions (such as inquiry proposal, personal notes and predictions) and
 - instrument development information (including observation formats etc.)
- (Lincoln & Guba, 1985:319–310).

Neutrality is Guba's (1981) final criterion for the trustworthiness of data. This is the extent to which findings are the result of the participant's understanding and not the result of other influences or perspectives of the researcher (Golafshani, 2003). According to Golafshani (2003), neutrality is strongly tied to confirmability. As with truth value, triangulation and reflexivity are used to establish some level of neutrality in qualitative studies through systematically attending to the context of knowledge construction and to the convergence of data taken from multiple sources (Arber, 2006; Golafshani, 2003; Thompson 2004). Yin (2003) argues that the data generated from a few participants contains a plethora of layered data often overlooked by other methodologies.

1.10.3 Internal validity

There are major challenges to internal validity reported by Yin (2014) which revolve around the validity of inferences from evidence based on subjective sources of information and which are, by definition, subjective and limited. There is danger of positing a causal relationship between two factors in an explanatory study when events cannot be directly observed. This is relevant to the current study because of

the exploratory nature of the study. Yin (2014:136–142) proposes that the best foundation on which to develop case study analysis is to have a general analytic strategy which may include aspects of “pattern matching, explanation building, addressing rival explanations and using logical models” in order to strengthen internal validity and result in compelling case study analyses.

In order to strengthen the internal validity of this study, all sessions with the client were video-recorded and examined with an external psychologist and expert in Somatic Experiencing™. This clinical supervisor was able to examine and discuss the quality of the therapeutic interaction as well as the implementation of SE™.

1.10.4 Researcher position

In terms of professional training, I am an educational psychologist who undertook a three-year specialisation in the therapeutic methodology of Somatic Experiencing™. The Milton Erickson Institute of South Africa (MEISA) is accredited to run this course in South Africa for medical professionals on behalf of Dr Peter Levine’s Somatic Experiencing Trauma Institute (SETI) in Boulder, Colorado. A senior SETI trainer (psychologist) is sent to South Africa bi-yearly to conduct training. Training consisted of two sets of six intensive eight-hour days of face-to-face and small group-work training. The training intensifies through the Beginner, Intermediate and Advanced years. A specified number of private supervision and personal therapy sessions are required by SETI in order to gain final accreditation from the Somatic Experiencing Trauma Institute. These hours increase over the course of the three-year programme.

In terms of ongoing professional development, I have been involved in my own private SE™ therapy with an SE™ practitioner as well as consulting with a clinical supervisor with a specialisation in the SE™ and other somatic methodologies. A university research supervisor oversaw the entire study.

In line with the phenomenological approach, with its emphasis on the subjective construction of knowledge, the researcher is viewed not as an objective spectator but as an active participant in the creation and co-creation of knowledge with the client. A

therapist brings her own world view and psycho-theoretical stance to her sessions and, in this case, to her study. In my case, experiences with OCD (and the latent discovery of a probable link back to relational attachment trauma) engendered a deep interest and motivation to explore the inter-relationship of trauma and OCD and the treatment options available. As part of a general interest in further education and upskilling, I was exposed to the theoretical foundations of the treatment methodology of Somatic Experiencing™. After an initial exposure to the information I began to rethink the possible causes and drivers of OCD. Identifying the role of neurophysiological stress on the nervous system, a question began to form – could the obsession and compulsions which define OCD actually be linked to the dysregulation of the nervous system and, if treatment attempted to address this, could it assist those who experience OCD? While, on the one hand, this creates a strong vested interest in my finding a treatment methodology which assists those who suffer with OCD. On the other hand, because of the ethical training involved in a Masters in Educational Psychology, not only is there a deep commitment to assist each client in an authentic way to find their own solutions to their OCD but the client him- or herself must attest to the value of the treatment approaches in order for therapy to be useful at all to the client.

As a point of clarification, I associate myself first and foremost as a psychotherapist and then as a researcher for this particular study. It is relevant that I, the psychologist, become a researcher once the sessions become part of a retrospective study which is significant in attempting to create some distance from the therapeutic role. In line with the humanistic approach to psychotherapy, I view myself and the client as equal partners rather than as an expert treating a patient. Therefore, the “participant” will be referred to as the client in this study.

1.11 CONTRIBUTION OF THE STUDY

1.11.1 Theoretical contribution

Theoretical contributions are anticipated to include exploring the parameters of and links between trauma and OCD within the context of OCD in adolescents. This is

instructive in terms of the dimensional model discussed in the DSM-5 and the need to explore the differing role of preceding anxiety or traumatic experiences which affect the development of OCD.

1.11.2 Contribution to practice

Practice contributions include gaining insight into a possible subtype of OCD which is closely linked to the neurophysiological dynamics of trauma. Such a dynamic will affect treatment options and methodologies.

1.11.3 Contribution to Somatic Experiencing™ practice

It will be instructive to identify if and how SE™ supports treatment of OCD. If it has a value in assisting with the management of underlying trauma and triggers it may be an important starting phase for therapy with some OCD adolescents.

This study's propositions include the following:

- Trauma-based OCD is borne out of an attempt to manage or diminish the effects of the trauma or fear;
- Trauma-based OCD may be influenced by the neurological manifestation of trauma or fear through the autonomic nervous system (i.e. repetition compulsion may be a neurological attempt to rebalance the functioning of the sympathetic and parasympathetic systems);
- In cases where trauma is strongly linked to OCD behaviours, SE™ is an effective methodology for assisting in the treatment of trauma or fear;
- Other treatment approaches, such as CBT and ERP, may form part of the treatment approach once the trauma or fear has been sufficiently processed.

The goals of data analysis will be:

- To ascertain the usefulness of SE™ as a treatment methodology for trauma-based OCD.

1.12 SCOPE OF THE STUDY

This thesis is organised into seven chapters as follows:

Chapter one has acquainted the reader with the background theory, context and motivation of the research problem. It also briefly introduced the research design, methodology and ethical challenges of this study.

Chapter two is a literature review which examines the positioning of this study in terms of existing research and theories. By exploring the neurophysiology of trauma, obsessive-compulsive disorder (OCD) and Somatic Experiencing™ (SE™) it defines the concepts, the reasoning and the problem in detail in order to fully explicate the research problem.

Chapter three looks in depth at OCD as a disorder and its placement in the DSM-5; it explores the links between OCD and trauma and looks into the neurophysiological trauma perspective. Finally, it looks at current treatment approaches and SE™ as an approach for trauma-based OCD.

Chapter four examines the theoretical framework for this study as well as the research methodology, ethics and methodological rigour of this study.

Chapter five examines the findings from the research of this study which is the implementation of Somatic Experiencing™ treatment sessions with an adolescent client with OCD. Based on session analysis, there will be a discussion of the results from identification of themes and insight into treatment effectiveness, incorporating literature into findings.

Chapter six covers the themes extracted and threshes out the related recommendations for psychologists based on the symptoms of trauma-based OCD in adolescents.

Chapter seven draws together the conclusions and takes a final look at general perspectives presented.

1.13 CONCEPT CLARIFICATION

The following definitions are provided to ensure uniformity and understanding of these terms throughout the study.

- Obsessive-compulsive disorder: the occurrence of obsessions (repeated and unrelenting notions, feelings or images) and compulsions (habituated actions or thoughts) which cause heightened anxiety or distress (APA, 2013:235);
- Somatic Experiencing™: focuses on the physiological responses that occur in the body when someone experiences or remembers an extreme stressor or a traumatic event. Levine (n.d.:B1.7) explains that traumatic stress symptoms arise when physiological activation takes place too quickly or too soon, and on an ongoing basis so that normal resiliency is overwhelmed and overactivation results. The SE™ process focuses on enhancing the client's ability to self-regulate and restoring the nervous system's normal cycling between alertness and rest by identifying and then separating out the trigger from the sensations or negative behaviours.
- Trauma or complex trauma: describes "the experience of multiple and/or chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature...and (during) early-life onset" (Van der Kolk, 2005:401)
- Adolescence: the period following the onset of puberty during which a young person develops from a child into an adult.

1.14 CONCLUSION

In this chapter I have explained the framework for this study. As described in detail above, numerous authors attest to the effects of trauma on neurobiology (Levine, 2010; Porges, 2003; Porges, 2011; Porges & Furman, 2011; Van der Kolk, 2014; Scaer, 1997). Based on this neurophysiological approach which asserts the significance of the role of the activation of the central nervous system in trauma, I have presented that trauma-based OCD may be underpinned by this activation and the effects of stress or trauma on the body. It is proposed here that the compulsive or perseverative actions may well be an attempt to discharge the visceral and neurophysiological reactions to trauma. It is, therefore, presented that a somatic treatment methodology, which addresses the effects of trauma on the neurophysiology of the client, may be of benefit when treating trauma-based OCD.

CHAPTER 2

LITERATURE REVIEW OF THE NEUROPHYSIOLOGY OF TRAUMA AND THE RELATIONSHIP OF TRAUMA TO OCD

2.1 INTRODUCTION

The fundamental premise on which this thesis is based is that of the interconnectedness of emotion and physiology. There are many approaches to support this argument from that of neuropeptides (Pert, 1999; Pert, Ruff, Weber & Herkenham, 1985) to central nervous system functioning (Porges, 2001, 2003, 2011) to motor-autonomic-sensory responses (Kozłowska, Walker, McLean & Carrive, 2015). Research undertaken by Pert, Ruff, Weber and Herkenham (1985) indicates that there is a close relationship between the body and the mind or emotions. In fact, as their research shows, the more we know about brain structures (such as neuropeptides in the case of their research), the harder it is to think in the traditional terms of a mind and a body. It makes more and more sense to speak of a single integrated entity, a “bodymind” (Pert, 1991:1).

However, it is also pertinent to acknowledge the significant role of micro and macro systemic interactions – the individual person with their family, the family with the community, the community within society, society within its time-frame and social-political circumstances. The complex systemic interactions also play a dynamic and influential role on the integration of the individual and their functioning in their life. To this extent, I will explore the bioecological model and social constructivism as theories to assist the foundational knowledge of the individual’s psychosocial development. The weaving of these dynamics and threads will become clear in Chapter 5 when the analysis of sessions is conducted and analysed to comprehend the experience of the client.

2.1.1. The bioecological model as a theoretical framework for understanding psychosocial development

Proponents of both the bioecological model and social constructivism share the understanding that the viewpoint of an individual is influenced by multiple factors. Bronfenbrenner's (2005) bioecological paradigm assists in viewing how the individual-in-society may develop by identifying numerous proximal and distal spheres of influence which influence the developing child or "biopsychosocial organism" (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2007). The microsystem is the innermost layer of Bronfenbrenner's model and encompasses intra-personal factors including personal relationships and influences from the closest factors such as family members and a child's school. The mesosystem includes connections between various aspects of the microsystem. The interaction between a child's family and the child's school can be considered aspects of the mesosystem. The exosystem includes features of the aspects within the microsystem over which the individual generally has little influence but which may significantly impact on the individual. For example, economic hardships within the family's background, parental unemployment, and other challenges will influence a child, but do not involve the child directly. The macrosystem includes communal or cultural systems and beliefs that affect a person's environment. The chronosystem adds the overarching aspect of time and the influence of both variation and consistency in the child's environment. This indicates both changes in proximal factors such as physiological and cognitive development, family structure, parental employment, in addition to distal factors such as societal changes, economic cycles and world events. Bronfenbrenner suggests that individuals constantly interact with these systems with constant bidirectional effects on both individuals and their environments.

The understanding of these systems is highly pertinent in light of the research presented in this chapter which explores multiple factors which effect the predisposition towards the development of OCD in children and adolescents and include factors such as genetic predispositions, familial relationships characterised by high conflict and neglect, temperamental predispositions towards conscientiousness in the child etc. (De Silva & Marks, 1999; Lin et al., 2007).

A valuable point which Bronfenbrenner (2005) makes is that these interactions are multi-directional and reflexive, that is acting upon one another. Many studies show that the systems surrounding the adolescent who has OCS or heightened anxiety are critical in the full-blown manifestation of OCD (Benedetti, Poletti, Radaelli, Pozzi, Giacosa & Smeraldi, 2014; Mathews et al., 2008). Therefore, the development of OCD would seem to be the result of complex interactions between multiple factors including genetic predispositions, neurology, personality and temperament, environmental risk factors, parenting styles and exposure to trauma (Benedetti et al., 2014; Borges et al., 2011; De Silva & Marks, 1999; Lin et al., 2007; Lochner et al., 2002). The layered and interacting systems will be utilised to analyse the findings from the therapeutic sessions in Chapter 6.

2.1.2 Social constructivism as a further theoretical framework for understanding knowledge construction

Social constructivism, by its very nature a phenomenological approach, assumes that all knowledge is constructed by individuals and groups (Gergen, 2009) and presents that what is known or understood derives from “communities of understanding” rather than an individual functioning as an isolated “psychological” person. Gergen (1985: 273) calls these “communities of shared intelligibility”. In other words, what is known arises from a process of (implicit) agreement that is linked to the ideological ‘agreements’ which exist below the language and culture within which ‘consensualising’ takes place. However, it is also incumbent on researchers to explore and investigate possible alternate derivations.

If, as the theory presents, all knowledge is constructed by individuals and communities with subjective agendas, then of course this study is equally driven by a biased and personal agenda which raises the question of whether this, or any other socially constructed knowledge, is reliable at all. Significant efforts are expended on research and scientific studies in an attempt to identify empirical “truths”. However, Gergen (2009, 2010) posits that scientific accounts and discoveries, while they can be useful, need to be understood as being constructed within specific contexts. Social

constructivists argue that no one philosophy should be privileged and that many different ways of knowing the world (with science being one of them) are valid. However, Gergen (2009) concedes that functioning within a community of practice is clearly necessary but one needs to hold an awareness of context from whence claims of validity come.

In terms of the current study, the construct of trauma within and beyond the prevailing theoretical confines of the DSM-5 will be explored in an attempt to go beyond how OCD is represented within the “mainstream” medical model and to elucidate possible alternatives. The structure of the DSM-5 and its placement of OCD as a chapter between those on anxiety and trauma would appear to encourage this perspective as does the more realistic idea of dimensions (which repositions the concept of comorbidity) as discussed in the introduction of the DSM-5 (APA, 2013:5).

Another alternative approach to examining the subject of OCD is presented by Bessel van der Kolk (2004) who has long argued for a shift in how trauma is viewed and has presented the construct of *Developmental Trauma Disorder*.

The traumatic stress field has adopted the term “Complex Trauma” to describe the experience of multiple and/or chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature (e.g., sexual or physical abuse, war, community violence) and early-life onset (Van der Kolk, 2004).

Van der Kolk (2004) states that DSM IV Field Trials found that trauma has its most pervasive impact during the first few years of life and he argues that the diagnosis of PTSD does not fully acknowledge the effect of exposure to childhood suffering or distress on the developing adolescent.

The basis of therapy and this phenomenological study is felt to lie in the quality of the relationship with the therapist. Furthermore, the researcher aims to guide the client to relate to his or her own history and physiological response to trauma and around traumatic triggers. Both of these relationships cannot be prescribed and are largely

dependent on the unique perceptions of the client, the therapist's ability to assist the client's awareness and to move towards resolution and healing.

For myself, the value of epistemological reflection is in the reminder to be humble in my presumption of knowledge. Tilsen and McNamee (2015) present the case for evidence-based practice within the context of therapy:

When we view therapy as social construction, we are not particularly interested in predetermining what sort of interactions will produce transformation. We are more concerned with adopting a relationally engaged stance with clients (Tilsen & McNamee, 2015:127).

In support of the relevance of this study, Presta, Marazziti, Dell'Osso, Pfanner, Pfanner, Marcheschi, Masi, Muratori, Mucci, Millepiedi and Cassano (2003) present the case for the increased insight into childhood and adolescent OCD. They motivate for addressing stressors at an earlier stage in childhood as well as for advancement of more specific methods for treatment. Insight into the disorder indicate that childhood-onset OCD is distinguished from adult-onset OCD by an increase in symptoms in the family, higher frequencies of neural indicators and tic-like symptoms. These authors cite research which posits that childhood-onset OCD is frequently preceded by other anxiety disorders (such as separation anxiety disorder, panic disorder or social phobia), mood disorders (bipolar and unipolar depression), eating disorders (anorexia), psychotic disorders (usually schizophreniform or atypical psychoses), or attention-deficit/hyperactivity disorder (AD/HD). Furthermore, studies cited by these authors indicate that OCD is closely linked to significant social functioning impairments.

Research indicates that there is a strong genetic predisposition for OCD, based on findings that rates for OCD increase significantly where there are other family members with OCD in contrast to the general population (Hettema, Neale & Kendler, 2001). Research studies also show that there are increased rates of general psychopathology in the families of children with OCD. De Silva and Rachman (1998),

posit that what may be hereditary is a neurotic tendency, which can serve to incline a person to developing OCD.

It is important to note that trauma does not always mean that a person experiences an extreme trauma such as those identified in the DSM-5, such as actual or threatened death, serious injury or sexual violence. In light of Van der Kolk's (2005a, 2014) argument for a category of "developmental trauma", research shows that even failure to establish secure attachment bonds, loss of a consistent caregiver and chronically mis-attuned caregiving can result in significant internal dysregulation. According to Mathews et al. (2008), emotional abuse or neglect in childhood is a relevant factor in the development of clinically significant obsessive-compulsive symptoms (OCS) in childhood and adolescence. Parenting styles (Barrett, Shortt & Healy, 2002) and personality factors also have been found to play a role in the development of OCD in children. Research shows that roughly half of all adults with OCD experienced symptoms of the disorder during childhood (Briggs & Price, 2009; Cromera et al., 2014). Therefore, the focus in this study is on OCD during the stage of late childhood or adolescence.

2.2 OCD AND TRAUMA

According to the *Diagnostic and Statistical Manual-5* (APA, 2013:235), OCD is characterised by the presence of obsessions (recurrent and persistent thoughts, urges or images) and compulsions (repetitive behaviours or thoughts which an individual feels driven to perform). Research has identified that OCD is one of the most chronic and costly mental disorders with a lifetime prevalence of about 1.6%–2%. (Nakatani, Krebs, Micali, Turner, Heyman & Mataix-Cols, 2011; Shavitt, Valerio, Fossaluza, Da Silva, Cordeiro, Diniz, Belotto-Silva, Cordioli, Mari & Miguel, 2010). A major theory about the neurological causes of OCD have been presented in section 2.5 below. In addition to these, other factors identified through studies as playing some role include parenting styles (Chabane, Delorme, Millet, Mouren, Leboyer & Pauls, 2005), temperament (Benedetti et al., 2014; Rachman, 1997) and genetics (Barrett et al., 2002; Pauls, 2008).

2.2.1 Mental and emotional pre-occupations of OCD and the link to trauma

From the viewpoint of neurophysiological research, a number of defining characteristics of OCD are viewed as highly relevant and form the core of this study. The first one is that a defining characteristic of OCD is the excessive mental and emotional pre-occupations which dominate a significant proportion of the person's mental "time" or focus (APA, 2013:235). By definition, OCD is diagnosable only if symptoms are disturbing and prolonged, or if they interfere considerably with daily functioning (APA, 2013:234). It has been presented throughout this chapter that the level of preoccupation with obsessional thoughts and the anxiety connected to these can be more accurately understood if the neurophysiological experience of trauma is fully acknowledged. Sasson et al. (2005) present that OCD is strongly correlated with increased responsibility, significant losses and the number of stressful events during the year preceding onset. Khanna, Rajendra and Channabasavanna (1988) found that the increased number of stressors appeared to be less controllable compared with events occurring in the control group. The relevance of the neurobiological research presented above is that it establishes that experiences of extreme stress or trauma can result in nervous system arousal which affects both the body and emotional states. Borges et al. (2011) identified that adolescents who had experienced distressing events (as measured by the Coddington Life Events Scale for Adolescents), were more susceptible to developing OCD later on. Studies by Boudreaux, Kilpatrick, Resnick, Best and Saunders (1998) and Maes, Mylle, Delmeire and Altamura (2000) cited in Borges et al. (2011) found a significant link between abuse, PTSD and the development of OCD in the general population: "Although physical or sexual trauma may contribute, emotional trauma (abuse or neglect) is likely to be the most relevant factor in the development of clinically significant OCS" (Mathews et al., 2008:748). A significant thrust of research about OCD and those who acquire it, relates to self-related constructs. Kyrios (2007, cited in Nikodijevic, Moulding, Anglim, Aardema & Nedeljkovic, 2015) posited that an ambivalent or delicate self-view increases the interpretation of intrusions as ominous, thereby worsening symptoms. García-Soriano and colleagues (2012, cited in Nikodijevic et al., 2015) highlight the involvement of self-worth contingencies in OCD.

According to the DSM-5, individuals with OCD often have other psychopathologies: “Many adults with the disorder have a lifetime diagnosis of an anxiety disorder ... or a depressive or bipolar disorder”. This is understandable considering that OCD has been linked to experiences of trauma as presented in numerous studies (Borges, et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999; Lin et al., 2007; Lochner et al., 2002). De Silva and Marks (1999, 2001) amongst others (Gershuny et al., 2003) report cases of trauma-induced OCD which indicated comorbidity between OCD and PTSD. These two disorders have a strong overlap due to symptoms of intrusive and unwanted thoughts along with rituals and avoidance behaviour developed to avoid fear-based thoughts (Mathews et al., 2008; Rozenman et al., 2017). Dykshoorn (2014) posits that:

Evidence was collected for a post-traumatic OCD and treatments of trauma-related OCD were considered. OCD and traumatic histories have a significant enough overlap that trauma should be a consideration when treating an individual with OCD (Dykshoorn, 2014:521).

Sasson et al. (2005) examined the co-occurrence of PTSD and OCD in soldiers after exposure to combat. In these cases, there was poor response to treatment among all cases and the researchers hypothesise that OCD stemming from trauma is a distinct type.

The position of this study is that, in a sub-group of people who experience OCD, the experience is characterised by recurrent and disturbing thoughts because of the preceding experience of trauma. Studies have also identified a higher rate of dissociation in people with OCD (Selvi, Besiroglu, Aydin, Gulec, Atli, Boysan & Celik, 2012) which is extremely interesting in light of the research linked to the fight, flight and freeze response above and the element of dissociation involved in the latter defence mechanism. Selvi et al., (2012:53) go on to say “(o)ne study revealed that tendency to dissociation in OCD patients is germane to childhood traumatic experiences”. A number of studies report that, in general, there are extreme fear-based beliefs in response to specific (often seemingly innocuous) stimuli or thoughts; rituals or compulsions are used in order to attempt to banish the thoughts. According to Friedman (2007), who cites Barlow (1988), anxiety is rooted in fear and its

manifestation is the preparation to flee. Rachman (1997:793) presents that “obsessions are caused by catastrophic misinterpretations of the significance of one’s intrusive thoughts”. Furthermore, while the content of typical and atypical or obsessional thoughts are quite similar, the intensity differs because of the meaning attached to obsessional thoughts – “obsessions last longer, are more intense, more persistent, cause more distress, and create more lasting impact on the individual” Rachman (1997:793). Rachman (2002) further argues that the more stressful the experiences, the greater the dysregulation or distress the individual will feel, and the greater the frequency of intrusive/obsessional thoughts.

2.2.2 Compulsions of OCD and the link to trauma

A second essential characteristic of OCD is that the individual feels driven to perform the compulsions, and the compulsions are not experienced as voluntary (APA, 2013:238). According to Rachman (1997), compulsions are more likely to happen when an individual feels that he or she has a heightened duty or obligation to stop undesirable events from occurring. It is presented that this argument may be particularly relevant to children taking into consideration Piaget’s delineation of cognitive development and Erik Erikson’s (1997) theory of psychosocial stages. This argument also acknowledges the value of Van der Kolk’s (2005) motivation for a specific type of trauma termed “developmental trauma” which identifies why the child is most at risk for complex trauma: “trauma has its most pervasive impact during the first decade of life and becomes more circumscribed, i.e. more like ‘pure’ PTSD, with age” (Van der Kolk, 2005:8). This makes sense in light of Piaget’s delineation of the child’s cognitive development process: the second stage of development – the pre-operational stage, lasting from about age two to seven – is largely characterised by egocentrism in that the child’s thoughts and communications are mostly self-referencing. This is not the egocentricity which defines adult self-involvement (notably that found in narcissistic tendencies) but, by the very concrete nature of their neurological development, they are still only able to see everything from their point of view (i.e. self-referencing). This type of thinking may well underlie the sense of having an excessive responsibility as it is well known in child psychology that children are prone to blame themselves for parental conflict or divorce or to feel extremely

responsible to fix ruptures in psychosocial relationships which are actually not their fault nor under their control.

Exploring Erik Erickson's (1997) psychosocial stages, the first stage revolves around trust versus mistrust. In line with attachment theory, during this stage the infant is completely dependent on his or her primary caregiver for stability and consistency of care. With predictability and sensitivity from their caregivers, they will develop a sense of trust in the world which develops the ego strength of hope. This imbues the infant with the knowledge of a stable core self which is safe in the adult world and will allow them to feel secure when threatened. According to Erickson, failure to acquire the ego strength of hope will lead to the development of fear. In line with Erikson's approach on the importance of trust, research by Winnicott (1964) and Bowlby (1969) has outlined how the quality of the early attachment can affect this dynamic of trust and influence a myriad of relationships with others in later life. Erikson's second stage is that of autonomy versus shame. It is a time of experimentation in which children attempt independence but inevitably fail at some attempts. If encouraged to keep trying, children will move through this stage with a healthy view of their abilities and develop a basic strength of will. If they are repeatedly shamed in their attempts, or continually undermined they may develop the core pathology of compulsion. It is interesting that research on parenting styles and OCD in childhood indicate that parents and children in the OCD group could be clearly differentiated from families in the other groups based on parent and child behaviour:

Mothers and fathers of OCD children were less confident in their child's ability, less rewarding of independence, and less likely to use positive problem solving. Children in the OCD group showed less positive problem solving, less confidence in their ability to solve the problem, and they displayed less warmth during their interactions with their parents (Barrett et al., 2002).

2.2.2.1 Dysfunctional thought appraisal

Dysfunctional thought appraisal is a significant defining characteristic of OCD (Dykhoorn, 2014) and, in light of the focus of this study, it is presented that children may be developmentally primed to internalise the blame and self-responsibility which

Rachman (1997) discusses and, therefore, may be more prone to develop obsessions and compulsions. This fearful appraisal leads to the belief that the external world is unsafe, that the internal 'world' is vulnerable and that the event or event-related thoughts will have catastrophic consequences (Ehlers & Clark, 2000). Briggs and Price (2009) identified that children with a predisposition towards anxiety and/or depression before the traumatic experience, are more likely to develop OCD. Furthermore, trait anxiety in the family structure appears to be a significant factor in influencing the child's ability to regulate their own anxiety. If caregivers are unable to manage or cope with distress and to model distress tolerance, children are likely to develop maladaptive coping techniques as a way to control their sense of distress. Obsessions and compulsions are one way to manage these (Dykshoorn, 2014). Studies indicate that people who develop trauma-based OCD can identify one or more critical events related to the development of the disorder: "Betrayal is a sense of being harmed by the intentional actions, or omissions, of a person who was assumed to be ... trusted" (Rachman, 2010:304).

2.2.3 Feelings of distress in OCD and the link to trauma

The final defining characteristic of OCD is that the compulsions are an attempt to prevent or reduce feelings of distress and frequently a momentary feeling of relief follows the performance of the compulsion (APA, 2013:236). Under the section of Anxiety Disorders, the DSM 5 (APA, 2013) explains that "(f)ear is the emotional response to real or perceived imminent threat, whereas *anxiety* is anticipation of future threat." Furthermore, it clarifies that fear is more often "associated with surges of autonomic arousal necessary for fight or flight, thoughts of immediate danger, and escape behaviors, and anxiety more often associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviors" (APA, 2013:189).

In light of the research linking fear responses in the brain with OCD circuitry (Dykshoorn, 2014, Gottlich et al., 2015; Sasson et al., 2005) and the argument presented above identifying one particular role of trauma in many cases of OCD, it is considered fitting that OCD be given its own chapter between Anxiety Disorders and

Trauma- and Stressor-Related Disorders. It is proposed that fear may be the initial response to a stressful experience and it gives rise to the metabolic and neurological arousal characteristic of trauma in the body. Furthermore, it may be that – at some point – in order to continue with the demands of “life” (e.g. school, homework, friends etc.), that arousal becomes transformed and integrated with anxious behaviours and thoughts which are an attempt to support coping in the present. Obsession and compulsions may then be the continual (ineffective and even counterproductive) attempts to discharge the arousal in an attempt to cope with “life”. According to Porges (2011:12), psychopathology may include a person’s “inability to inhibit defence systems in a safe environment”. This study posits that there is a place in psychopathology for a category of OCD which is closely preceded by trauma (*trauma-based OCD*) and that an additional or alternative treatment methodology is therefore required. This study will explore the value of SE™ in addressing the core aspects of OCD which are linked to trauma.

Many people with OCD have dysfunctional beliefs linked to the overestimation of threat (DSM 5:238) and fear of something impending and dreadful happening. In an interesting study, Rozenman et al., (2017) found that OCD symptoms linked to symmetry, ordering, counting and repeating were well predicted by autonomic arousal and somatic complaints. According to this study, this was not statistically true for symptoms that were linked to aggressive, sexual, religious, somatic obsessions and checking compulsions. In the former, symptoms were associated with a salient sensory component and desire to feel “just right”. Youth with these symptoms may be hyper-focused on their physiological experience and they suggest that treatment includes all strategies to manage somatic complaints. They also suggest that this cluster of adolescents might be discerned by questions which explore symptoms of the physical components of fear.

Linked to this is an inflated sense of responsibility to avert this occurrence or phenomenon. Mathews et al. (2008) identify an indirectly related factor with the personality facet of conscientiousness. Barrett et al. (2002) identify a direct link between obsessive-compulsive symptoms and dysfunctional parenting styles related

to emotional abuse such as over-control, high-expressed emotion and emotional rejection.

Based on these findings, there is a thesis that, when OCD develops after a traumatic event, an etiologically distinct subtype of OCD may exist (Sasson et al., 2005). Most critical, for the thesis of this study, is the theoretical perspective which is supported by neurobiological research (Porges, 2011) which identifies the binding of physiological survival energy with environmental triggers to produce maladaptive behaviours. It is proposed here that the role of compulsion is, in fact, an attempt to find a neurobiological discharge for the experience of stress in the body. As summarised in the Polyvagal Theory, *neuroception* (the ability of the senses to sense safety or danger and to initiate responses in the nervous system) initiates the involuntary impulses of the sympathetic nervous system (fight-or-flee response) and the parasympathetic nervous system (freeze response) and that these – along with the more phylogenetically current social engagement system – form the basis of our self-protective neurobiology (Porges, 2011). According to Porges (2011:12), “psychopathology may include a person’s inability to inhibit defence systems in a safe environment”.

2.2.4 Neurobiology and trauma

“To understand the stress response, we must possess a fundamental knowledge not only of psychology but of physiology as well”
(Everly, 2002:54).

The above-mentioned quote indicates that psychological stress and trauma have an intricate and indivisible relationship with physical systems and neurobiological processes. It can be said that, “emotions are cognitive states resulting from the integration of bodily perceptions with propositional attitudes” (Barlassina & Newen, 2014:638). We now understand that there is a bidirectional relationship between the body and the “mind”. It is presented in this chapter that this insight shifts how we view psychological disorders and opens the way for a significant role for neurophysiology and treatment methods developed to treat disorders such as trauma and OCD.

At the outset, it should be clarified that there is much debate around the terms “stress” and “trauma”. Dulmus and Hilarski (2003) present the argument for a *stress-trauma-crisis continuum* highlighting the fact that they are all experiences of distress, in increasing degrees. This thesis will refer to a “stressor” as an event which causes pressure and urgency; “stress” will refer to a prolonged sense of strain or tension (Dulmus & Hilarsdi, 2003); and, “trauma” will refer to a more extreme experience which Maslow (1968) explains as one which “violates the basic needs of safety and thwarts human growth and healthy functioning”.

From the historical perspective of Cartesian dualism, there has been a strong leaning towards separating the body from the mind (or emotions) in relation to stress and trauma (Pert, 1991). However, there has also been a long history of dissent from this mainstream argument and noteworthy strides made in more recent years towards understanding just how interrelated these “dimensions” actually are (Pert, 1999). The quantum shift in neurophysiology and what we can now see about the brain and the central nervous system using sophisticated machines and processes such as the functional magnetic resonance imaging (fMRI) procedure has radically influenced how we understand disorders and treatment options. It has also revolutionised how we view trauma (Porges, 2001, 2003).

2.2.5 The longest cranial pathway connects neurology and physiology

Based on the research of a number of researchers (Friedman, 2007; Klarer, Arnold, Gunther, Winter, Langhans and Meyer, 2014; Porges, 2003, 2011), this thesis will utilise studies of the vagus nerve – the longest cranial nerve – in order to explain how this neurophysiological conduit creates a dual highway utilising the three subsystems of the autonomic nervous system (ANS) – the parasympathetic nervous system (PNS), sympathetic nervous system (SNS) and the enteric nervous system (ENS), the latter system being part of the former systems. Passing from the brain, through the neck and thorax to the abdomen, the vagus nerve connects somatic and visceral fibres with multiple organs in the body. It is both efferent and afferent, that is, carrying information down from the brain and relaying chemical and visceral information back to the brain. In fact, according to scientists, about 80–90% of the signals passing along the vagus

nerve come from the body, mainly the enteric or gut, to the brain (Porges, 2011). These findings have significant implications for how stress and trauma are understood.

2.2.6 How mammals respond to trauma

One of the ways that clarification on how humans respond to trauma has been found in the animal kingdom, with the study of the mammalian response to stressors and how the fight, flight and freeze responses work in all mammals. When an animal becomes aware that its safety or life is under threat, its brain mobilises large amounts of chemical and neurophysiological systems in order to defend against the threat. A flood of epinephrine, norepinephrine and many other hormones causes changes in the body that support survival including the increase of heart rate and blood pressure, dilation of pupils to take in as much light as possible, the tensing up of muscles which are energised by adrenaline and glucose, the relaxation of smooth muscle in order to allow more oxygen into the lungs, and the shutdown of non-essential systems like digestion in order allow more energy for emergency functions (Davis, 1997; Van der Kolk, 2014). As seen in the image below, the buck's sympathetic nervous system is in extreme arousal with heartbeat, breathing and all systems geared for escape and survival. Based on the understanding of the relationship between brain functioning and processing of stressors, research is indicating that trauma in humans also develops on a neurophysiological level through the central nervous system. As a result, there has been a dramatic move away from "talk therapy" alone towards integrating visceral and somatic discharge into therapy as emotions and extreme emotions, are no longer understood to reside in the "mind" or "psyche" only (Barlassina and Newen, 2014).



Picture 2.1: Predator chasing its prey who is in full-throttle flight response.

(Crowley, 2017, still from video file)



Picture 2.2: Fear instigating the freeze response in a boy facing his aggressor

(Zaman, 2010)

A key finding of neurophysiological research in trauma has shown how the central nervous system reacts to stressors and how it mobilises other bodily systems in the mammalian fight, flight and freeze responses. To this end, the Polyvagal Theory as presented by Stephen Porges (2001, 2003, 2011), assists in identifying that if a person is confronted with a stressor (as depicted in Picture 2.2 of the boy being attacked by the policeman), the first part of our nervous system will try to negotiate by using the face, vocalisation and language. One can imagine the begging, pleading or attempts at persuasion that one might use preceding any attack, as seen with the boy in the picture. If that doesn't work, then the sympathetic nervous system becomes activated

for fight-flight as with the buck and the lion. And, if you can't escape or fight, then a state of immobilisation or freeze is initiated. This is visible in the cowering boy's position as he faces the onslaught of the policeman's attack in the picture. According to many researchers and clinicians, this neurophysiological response has extreme implications for the body/mind systems. As Levine (1997) argues,

(U)ntil we understand that traumatic symptoms are physiological as well as psychological, we will be woefully inadequate in our attempts to heal them ... trauma represents animal instincts gone awry. When harnessed, these instincts can be used by the conscious mind to transform traumatic symptoms into a state of well-being. (Levine, 1997:32)

Scaer (1997, 2005) and Levine (2008, 2010) propose that like animals, humans have the natural capability to discharge the neurophysiological effects of trauma.

2.2.7 Somatic Experiencing (SE™) as a treatment methodology for trauma including trauma-based OCD

Somatic Experiencing (SE™) is a therapeutic methodology based upon current neurophysiological understandings of trauma in humans. Animals in the wild are not usually traumatised by the daily life threats they encounter while humans develop traumatic symptoms of hyper-arousal, shutdown and dysregulation. In his work as a psychologist, Peter Levine created a somatic treatment methodology which works with the release of trauma at a neurophysiological level through tracking physiological reactions in the body. Based on research which identifies a link between preceding trauma and OCD, the supposition of this thesis is that when trauma is experienced preceding the development of OCD, then *trauma-based OCD* may be a justifiable category and treatment approaches should incorporate a somatic trauma-release based element in order to for there to be successful treatment resolution. Research indicates that OCD has a prevalence rate of 2–3% in the general population with the World Health Organization listing it as among the 10 most disabling disorders affecting participation in all arenas of life. A significant percentage of people suffering from OCD do not respond adequately to various types of treatment therapies including CBT, ERP and SSRIs. Predictors of treatment resistance include earlier age of onset, lowered

insight, comorbid disorders and traumatic life events particularly traumatic childhood experiences (Albert, Aguglia, Bramante, Bogetto & Maina, 2013). Therefore, the premise of this thesis on trauma-based OCD is based on the principle that trauma is a highly activated incomplete biological response to threat, frozen (in the body) in time (Levine, 2010:98). This is viewed as a potentially significant factor when considering effective treatment approaches for some cases of OCD. Although some research has been carried out with SE™, there is a general lack of research into it as a treatment methodology and a marked gap within OCD and trauma.

A proviso should be made in that while this study utilises basic neuroscience to assist in understanding how trauma affects the body and the mind, it does not aim in any way to contribute to the highly complex medical and neuroscientific studies. Rather, this study's aim is to explore the possible contribution of the neuro-somatoform perspective to the psychological treatment approaches for trauma-based OCD.

2.2.8 Theoretical assertion of current study

Given the empirical evidence that trauma-based OCD exists as a phenomenon, it is argued that a treatment methodology directly related to the neurophysiological effects of trauma may be of value in treating OCD. This study explored the value of Somatic Experiencing (SE™) in addressing the core aspects of OCD which are linked to trauma.

2.3 WHY IS TRAUMA TRAUMATISING FOR HUMANS BUT NOT FOR MOST ANIMALS IN THE WILD?

Levine (2010), who holds a doctorate in psychology and a PhD in medical biophysics and is the recipient of the United States Association for Body Psychotherapy's lifetime achievement award, recounts how the methodology of SE™ arose out of the identification of trauma symptoms in clients and the concomitant observation that animals in the wild are generally not traumatised following their often daily encounters with life-threatening challenges. This raised the incisive question of why this is so. Many researchers (Davis, 1992; Davis & Whalen, 2001; Ledoux, 2014; Van der Kolk, 2014; Levine, 2010) present the case that the main driver of the mammalian brain is

to promote survival and all neurobiological systems are engaged for optimal survival during threat. The brain is primed to sense, process and mobilise in response to threatening information from the external environment (Goldstein, 1995, Perry 1999). This understanding of the holistic engagement of brain and body is key in appreciating how traumatic experiences impact and alter functioning in cognitive, emotional, social, behavioural and physiological systems.

2.3.1 Fight, flight and freeze response in animals and recovery from threat

After speaking to game rangers who were undertaking research in the wild, and viewing footage, Levine noted that animals in the wild appear to recover spontaneously from the intense activation of fight, flight or freeze by carrying out involuntary reactions such as running, sweating, changes in breathing patterns and shaking and trembling, which release the intense biological arousal (Payne, Levine & Crane-Godreau, 2015; Scaer, 1997). According to Levine's interviews with game rangers in Africa, if animals who are captured for tagging and examination do not go through these responses after release they frequently die in the wild, possibly because of their inability to initiate appropriate self-protective behaviour (Scaer, 1997). Levine explains that the fight-or-flight response is initiated in order to get away from the source of threat – muscles prepare escape by increasing their tension level, heart rate and respiration increase, the entire metabolic system is flooded with adrenaline, and blood is diverted away from the viscera to the muscles. The mammalian goal is to protect ourselves either through escape or attack (if escape is not possible); if these actions are thwarted, our body will go into freeze or tonic immobility which is a state of extreme shock and fear.

2.4 ANSWERING THE QUESTION

In discovering the answer to his own question, Levine recounts his personal experience with trauma after he was hit by a car while crossing a road (Levine, 2010:75):

So I go into a freeze, into a panic. And at that moment, I dissociate from my body – it's like I'm out of my body and I'm looking down and seeing this man kneeling by my side and seeing me in this frozen state. Of

course, somebody called on their cell phone for an ambulance. But then after a little while, he kept asking me questions, and I was able to get enough orientation to say, 'Please just give me time, I won't move my neck,' and I didn't want to answer questions about what my name was, where I was going, what the day was. I needed to collect myself, and all of those things were making things much worse. So I was able to set enough of a boundary to have him back off. Then miraculously, serendipitously, a woman came, much calmer, sat by my side, and she said, "I'm a doctor. I'm a paediatrician. Can I do anything?" And I said, "Please just sit here by my side." And she touched my hand with her hand, and we folded our hands together.

According to Kozłowska et al. (2015), the defence response to threat – also known as the defence cascade – in the animal model includes “arousal, freeze, flight or fight, tonic immobility, collapsed immobility, and quiescent immobility”. These authors identify that this response is mediated by neural circuits involving the extended amygdala, hypothalamus, periaqueductal grey, ventral pontine tegmentum, ventral and dorsal medulla, and spinal cord. However, the human model is complicated by the subjective representations which imbue experiences with meaning. These, like real external threats, have the capacity to galvanise the body's defence systems. Fear states can therefore be provoked by combinations of triggers, some of which will be accessible to conscious awareness, and some not.

Levine (2010) was initially physically restrained due to medical concerns but he eventually managed to convince someone that he needed to allow his body the freedom to make small movements, to discharge. Levine (2010) points out that the medical response to trauma is frequently to prevent movement of the person involved in an accident out of concern for physical and neurological damage (such as brain trauma, etc.). In addition to this, frequently a person may inhibit their own reactions to an accident such as a fall out of fear of being conspicuous or embarrassed. Think of losing your footing or falling down stairs in front of people; the first thing we often try to do is say we are “fine”, attempt to brush off any hands reaching out to help us and

get up as quickly as possible. How would it be, in fact, if we took as long as we needed to feel the shock in our bodies, identify the pain, muscle tension and heart rate increase; and allow for corrective or curative actions such as lying down, shaking or crying?

2.4.1 The case for discharging trauma in the body

Levine (2008) references footage of a bear being chased down by an airplane in order to be tranquilised and tagged (seen in still 1) in order to explain the freeze response (in still 2).



**Picture 2.3: Bear's convulsive tremors after waking from tranquiliser
(Vikander, 2012, still from video file)**

Levine (2008) relays that after the animal is tranquilised and as it starts to come out of its unconscious state, it begins to tremble and shake until this reaches near convulsive tremors. Eventually, the shaking slows down and the bear takes some deep breaths.

When the bear's response is viewed in slow motion, it becomes obvious that the seemingly random leg gyrations are actually coordinated running movements. It is as though the animal completes its escape by actively finishing the running movements that were interrupted at the moment when it was tranquilized (Levine, 2008:26).

According to Levine, it is when the discharge is thwarted that trauma will very probably result because when “the message to normalize is not given, the brain just continues to release high levels of adrenaline and cortisol, and the body holds onto its high-energy, ramped-up state” (even in non-stressful contexts) (Levine, 2008:27). If animals don’t experience this discharge, a host of adverse behavioural and health problems may follow (Scaer, 2001, 2005). In other words, trauma is the result of the fight/flight or freeze circuits being initiated and not being completed. He clarifies that these reactions are time-sensitive and need to run their course, as the massive chemical energy that was initiated for fight/flight invades the body and then needs to dissipate through discharge.

2.4.2 The freeze response in mammals

In the animal world, freezing may be present at first as a state of alert immobility, as in the deer or zebra that assumes a motionless state when orienting to the possible presence of a predator. Once the prey animal becomes aware of the predator it initiates action, a so-called ‘flight’ response; in some cases, it will attempt to fight back and attack the predator. If it is captured by the predator it will enter into a deep state of freeze, associated with marked changes in autonomic state. According to Porges (2011), this is an adaptive biological reaction to the inability to utilise fight/flight mechanisms to defend or to escape. In the video stills below, the buck is immobilised or frozen and is dragged as if dead by the hyena; however, when the possibility of escape becomes apparent to the buck, it suddenly springs up and powers an escape.



A buck is captured by a hyena. A cheetah tries to join in with the kill but is rejected by the hyena and starts to walk away.



The hyena positions the buck in order to eat it. The cheetah starts to re-approach; the hyena leaves the buck in order to chase it off again.



In this momentary hiatus, the buck suddenly leaps to its feet and bounds away, escaping from the predators.

**Pictures 2.4: Gazelle's lucky escape from cheetah and hyena by playing dead
(ContentMint, 2011, stills from video file)**

According to Scaer (2001), when the freeze response is provoked, the energy-conserving drives controlled by the parasympathetic nervous system "truncates" (Scaer, 2001) and dominates the state of high sympathetic activation which initiated the flight action; as both the sympathetic nervous system and the parasympathetic nervous system (the vagal 'brake') are now activated, this leaves the organism in a state of repressed arousal. Animals instinctually use this repressed energy to power an escape (as seen in the stills from the YouTube video above) where possible. If one uses the analogy of a car, the accelerator and the brake are simultaneously being fully engaged which would result in the car stalling and the engine cutting out.

This repressed energy can sometimes lead to violent and irrational outbursts as the animal or person comes out of the immobilisation state. Levine (2010) explains that, as the person or animal goes into immobilisation, so they come out in the same way. In the stills below visuals of immobilisation (tonic immobility) in Still 1, defence

orientation in Stills 2 and 3 and attack response in Stills 4 and 5 can be seen. Haines (2015) presents that fear increases immobility and also makes the “process of exiting immobility fearful and potentially *violent*”. As the victim or prey comes back to consciousness so to speak, and becomes aware of the attacker hovering threateningly, the victim will either default to a rage counterattack or it will attempt a frantic – “wild and mindless” – escape. This is clearly visible in the video of the small mouse (stills included below) who turns on the much larger cat with such aggression that it backs the cat into a corner.



Pictures 2.5: Mouse escapes after immobilising; demonstration of the defence cascade (Haines, 2015, stills from video file)

In contradistinction to this, human beings who may be unable to escape trauma or to fight back (typical in cases of ongoing abuse, cases of children watching abuse of a sibling or parent, aftermath of a natural disaster, bullying, etc.) are frequently still in a state of fear and retain the chemical reactions coursing through the body. Levine (2010) identifies a “rage counterattack” which may be entered into when someone is being pacified after a traumatic experience. Van der Kolk (2014:54) clarifies that when the primal fight or flight response is blocked – as when someone is prevented from taking effective defensive action – the brain continues to secrete stress chemicals and electrical circuits continue to fire.

2.5 TRAUMA AND AUTONOMIC AROUSAL

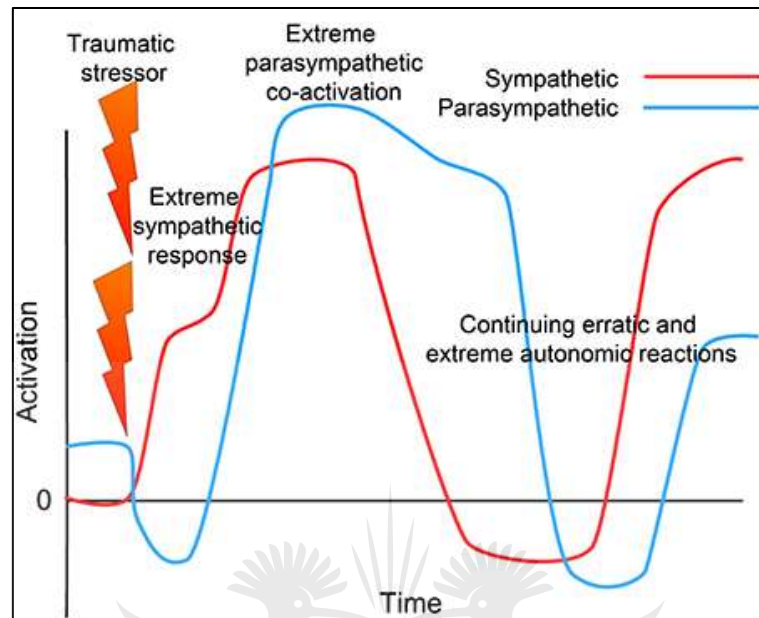


Figure 2.2: Traumatic Stress Response (Payne, Levine & Crane-Godreau, 2015:6)

Central to Levine's theory is the concept of the traumatic stress response as depicted in this diagram (Payne, Levine & Crane-Godreau, 2015). In the face of extreme trauma, at first there is an extreme sympathetic activation with loss of vagal tone as depicted in the spiking red line in the diagram (Porges, 2011; Payne, Levine & Crane-Godreau, 2015). If the stress continues, there is a co-activation of the parasympathetic (dorsal vagal) system, as seen in the spiking blue line, along with the sympathetic, leading to freeze, collapse or dissociation. As Payne et al. (2015:5) explain:

The ANS and whole CRN (the core response network including the sub-cortical autonomic, limbic, motor and arousal systems) becomes locked into a state of extremely high activation of both the sympathetic and parasympathetic systems, and may oscillate erratically between extremes. This may manifest as alternating depressive shutdown and extreme anxiety or rage.

As depicted in this diagram, neurophysiological research has established that enormous amounts of neurophysiological and chemical processes are involved in the

person's response to fear. According to an extensive review of studies conducted by Twardosz and Lutzker (2010), when a threat is identified, "the hypothalamus releases corticotropin releasing factor (CRF) which stimulates the pituitary gland to release adrenocorticotrophic hormone (ACTH); this causes the release of glucocorticoid (cortisol) from the adrenal gland". Behavioural responses accompanying these secretions include increased heart rate and blood pressure, troubled sleep and other signals of anxiety. Van der Kolk (2014) cites research by Steve Southwick and John Krystal (Yale), Ariel Shalev (Hadassah Medical School), Frank Putnam (NIMH) and Roger Pitman (Harvard) who all found that traumatised people keep discharging sizable quantities of stress hormones long after the threat has occurred.

This may assist us in appreciating the defining characteristics of OCD: if the powerful neurophysiological messages are borne out of trauma and threat, it makes sense that the mental and emotional preoccupations are extreme or excessive (APA, 2013:235). From the neurophysiological perspective of the Polyvagal Theory, the instinctual survival impulse creates a demand to perform certain actions and these actions, or compulsions are not experienced as voluntary (APA, 2013:238). It is suggested that, because of the profound or primal sense of threat, the compulsions are an attempt to undo or reduce feelings of distress and frequently a momentary feeling of relief follows the performance of the compulsion (APA, 2013:236). Scaer (1997) reinforces Levine's (2010) argument that humans frequently do not discharge this autonomic arousal (he mentions acculturation or neocortical inhibition as possible reasons): there is "strong evidence" that humans seem to retain the motoric stimulation in limbic and procedural memory systems. Procedural memory (implicit or unconscious memory) involves the retention of "learned sequences of synchronized motor acts (which) ... once learned ... are stored with a high degree of recoverability probably in orbitofrontal and limbic ... cerebellar, vestibular and basal ganglia connections of the brain" (Scaer, 1997:2).

According to Van der Kolk (2014) and Porges (2011), without discharge or arousal completion, the body experiences that it is still under threat. "Being traumatized means continuing to organize your life as if the trauma were still going on ... as every new encounter or event is contaminated by the past" (Van der Kolk, 2014:53). The aim of Levine's Somatic Experiencing™ treatment methodology is to release this stored

energy, and thereby to turn off the threat alarm that causes severe dysregulation and dissociation in everyday functioning.

There are – no doubt – many of us who have been involved in relatively serious accidents (such as a car accident) or traumatic events (such as a hijacking) where restorative or calming action was inhibited; this may have been due to the circumstances (such as needing to call an ambulance, seeing to the needs of passengers especially those of a child or even the need to be cooperative in order to not anger the perpetrator) or even self-consciousness or “acculturation” (such as if one falls in a public area). Levine explains that “(b)ecause the symptoms and emotions associated with trauma can be extreme, most of us ... will ... attempt to repress these intense reactions. Unfortunately, this mutual denial can prevent us from healing. In our culture there is a lack of tolerance for the emotional vulnerability that traumatised people experience. Little time is allotted for the working through of emotional events. We are routinely pressured into adjusting too quickly in the aftermath of an overwhelming situation” (Levine, 1997:32). Van der Kolk (2004) suggests that, in fact, one of the most damaging aspects of trauma is the inability to act, to protect oneself, to “establish ... physical efficacy as a biological organism and recreate a sense of safety” (Van der Kolk, 2004). He presents that this thwarted need is what gives rise to PTSD. This can be viewed in the photo below where shock and overwhelm lead to collapse. Levine (1997) happened upon a startling finding – that human beings, faced with traumatic or life-threatening events where expression of the neurophysiological after-effects are inhibited or repressed, frequently develop intense fear-based reactions which continue long after the event has passed and this frequently leads to psychiatric disorders. This can be seen in the photograph below, where extreme trauma with little physiological release, can lead to freeze, collapse and PTSD.



Picture 2.6: Japan's earthquake 2011 (Haq, 2011, blog post)

2.5.1 When traumatic energy is not discharged

In an online interview with Yalom and Yalom (2010), Levine explains that *dysregulation* is the state of the body when traumatic energy is unprocessed, with residual activation keeping a person in a state of reactivity and readiness. The one extreme of this is the “stuck on” position and the other is the “stuck off” position. According to Levine (Yalom & Yalom, 2010), the former is when the sympathetic nervous system is activated, when the person feels that something bad can happen at any moment and the psycho-physiological reactions can manifest as “anxiety, panic, mania, hypervigilance, sleeplessness, dissociation, attention deficit, OCD, emotional flooding, chronic pain, hostility/rage etc.” Being “stuck off” is when the parasympathetic branch of the autonomic nervous system is dominant showing up as “depression, flat affect, lethargy, exhaustion, low impulse/motivation, chronic fatigue, dissociation, many of the complex syndromes, low blood pressure.” Levine presents that trauma survivors may present with one extreme or oscillate between the two. If the discharge process is repeatedly disturbed (e.g. by ongoing abuse or inability to stop the stress) each successive state of shock will last longer (McEwen & Stellar, 1993). The insight gained from this synergistic historical meeting of psychology and neurobiology, may give some insight into cases of treatment-resistant OCD which are preceded by trauma.

2.6 THE POLYVAGAL THEORY AND IMPLICATIONS FOR TRAUMA DEFENSE MECHANISMS

The Polyvagal Theory creates an important framework from which to comprehend and analyse the critical defence strategies elucidated by Levine (2010), Scaer (2005), Schore (1994), Van der Kolk (2005, 2014) and others above. The idea of visceral emotion was initiated with the discovery of the vagus nerve (Pert, 1997:136) and was developed extensively by Porges (2011) with his Polyvagal Theory. The vagus nerve – or the 10th cranial nerve – exits the brain and extends on either side of the spinal cord linking the heart, lungs, gut, mouth, tongue, throat and skin with the viscera and muscles working through the sympathetic and the parasympathetic systems. It is a bidirectional conduit carrying incoming information from the senses (*neuroception* is Porges' term for this) through the nervous system to the brain, providing information about what the body is sensing, and also transmitting outgoing information which governs a range of reflex responses including heartbeat, breathing and movement.

According to current research by Klarer et al. (2014), “Vagal afferents are an important neuronal component of the gut-brain axis allowing bottom-up information flow from the viscera to the CNS”; furthermore, “vagal afferent signaling has been implicated modulating mood and affect, including distinct forms of anxiety and fear”. This is why some scientists have referred to “gut instincts” as the second brain. This system is the primary apparatus in control of the fight-flight response and the freeze-dissociate response termed as the Polyvagal Theory (Porges, 2003).

The theory is founded on an identification of the adaptive neurophysiological behaviours supported by three neural circuits, each representing a different evolutionary stage of the autonomic nervous system. The order in which these neurological circuits developed denotes a response order in mammals with the most recent neural circuit, the social communication behaviours, responding first to anxiety-invoking situations or stressors (Porges, 2011). This trajectory results in more complex neural structures (such as the orbital-frontal cortex) being involved in the regulation of behaviour, especially the social communication behaviours needed to engage others.

2.6.1 Three phylogenetic survival systems

The three survival systems are controlled by the sympathetic and parasympathetic nervous systems. The defence strategy of immobilisation or freezing is the most ancient defence mechanism, controlled by an unmyelinated nerve which is part of the dorsal vagal complex in the upper part of the brainstem (Porges, 2011:14). It controls digestion and responds to threat by inhibiting or depressing metabolic activity by slowing the heart, i.e. immobilisation. Thus, the vagus has been promoted by many as an “anti-stress” mechanism. However, there is another approach in the literature indicating that extreme activation of this ‘brake’ action on the sympathetic system can lead to lethal physiological reactions such as bradycardia (abnormally slow heart rate) and apnoea (cessation of breathing) and, therefore, it is fitting that other terms for this state include *death feigning* and *tonic immobility*. The important point which Levine clarifies (2010) is that this state often accompanies the highest level of fear which results in shutdown to prepare for death. This parasympathetic complex is functional at birth but is less developed at this time; the sympathetic system is more mature at birth, fostering critical early attachment and bonding (Schorer, 1994). The continuing maturation of the parasympathetic system is related to the ability to constrain sympathetic activity, and results in a decrease in mobilisation and levels of stimulation.

A significant point which Porges and others clarify is that paralysis or freeze occurs after enormous amounts of hormones have entered the body to prepare for fight or flight (Scaer, 2001) and failure to correctly discharge this energy is what frequently results in PTSD (Scaer, 2001; Schorer, 1994; Van der Kolk, 2014). I am hypothesising that, similarly, the failure to discharge this energy may result in the compulsive actions characteristic of OCD although there is possible evidence to indicate that an association may be made between the triggering stressor and the compulsive action through the role of the orbitofrontal cortex (OFC). According to researchers, “The occurrence of this defensive response is a predictor of the severity of psychiatric disorders and may be considered as an index of an intense reaction to a traumatic event.” (De Cassia, Alves, Portugal, Fernandes, Mocaiber, Souza, De Paula, Volchan, De Oliveira & Pereira, 2014:1). Cases of victims reporting that they felt “frozen in time” or were aware of what was happening but had disconnected from the experience abound in research on traumatic experiences. For example, many studies relating to

rape show that a substantial percentage of men and women experience an involuntary physiological immobility during the assault (Galliano, Noble, Puechl & Travis, 1993; Marx, Forsyth, Gallup, Fusé & Lexington, 2008).

The second stage is characterised by activation of the sympathetic nervous system – metabolic output is increased and inhibits the visceral vagus to allow for “fight-or-flight” mobilisation behaviours. The objective of “the fight-or-flight” response is to escape and all muscles prepare for this by increasing their tension level. The hypothalamus receives the danger signal activating the sympathetic nervous system by releasing the hormone corticotropin-factor (CPF) into the pituitary gland. The pituitary gland then releases the adrenocorticotrophic (ACTH) hormone which spreads through the bloodstream and activates the secretion of 30 more hormones which ready the body to deal with the danger. Once these hormones are released, several sympathetic nervous system changes start to occur in the body: heart rate and blood pressure increase, pupils dilate in order to take in as much light as possible, veins in the skin tighten in order to send increased blood supply to the major muscles, blood sugar levels rise and muscles tense, other muscles relax so that more air can be taken into the lungs, and systems such as the immune and digestion system shut down so that the body can give energy to the other systems that need it.

The third stage, unique to mammals, is characterised by a myelinated vagus that can rapidly regulate cardiac output to foster engagement and disengagement with the environment (Porges, 2011). If one thinks about psychotherapy, it is social engagement – most significantly within a safe environment – which is foundational to all interactions around healing and insight.

As pertains to this study, Porges’s theory has facilitated a deeper understanding of the connection between the “mind” – and the experience of anxiety and trauma – and the “body” (viewed as the chemical and motor processes involved in fight, flight and freeze): the vagus is primarily a sensory nerve with roughly 80% afferent fibres (sending information from the viscera to the brain) and about 20% efferent fibres (sending information from the brain to the body). In Figure 2.3, it can be seen that these efferent signals connect largely to motor areas (messages to these motor pathways take place within milliseconds). In its tonic state, the vagus functions like a

brake on the heart's pacemaker. Through the parasympathetic system as shown below, when the brake is removed, the lower vagal tone enables the heart to beat faster. This understanding proposes that our viscera react involuntarily (“a gut reaction”), and then send an efferent signal which the brain interprets as fear or worry.

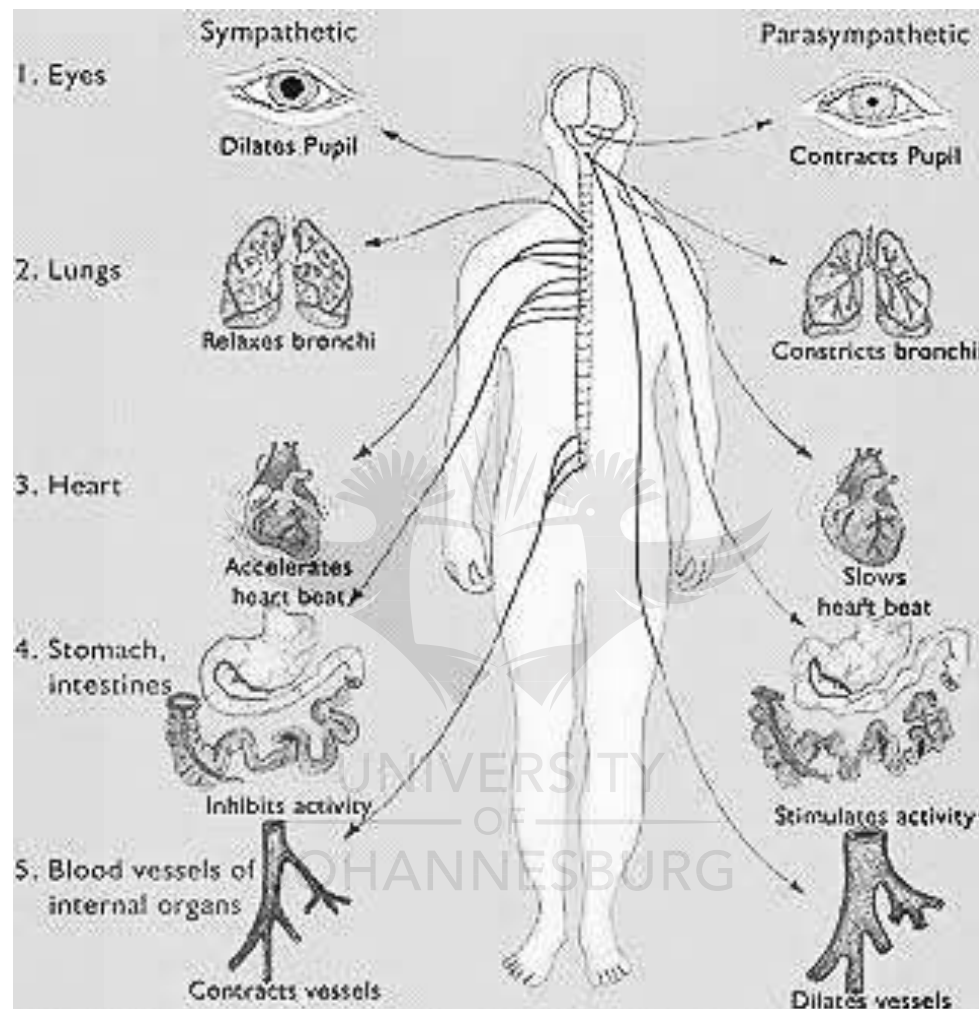


Figure 2.3: The Polyvagal Theory developed by Dr Stephen Porges

This diagram shows the inherently dual neurophysiological relationship between the sympathetic nervous system (SNS), which controls the fight/flight impulses, and the parasympathetic nervous system (PNS), which creates the environment for rest and relaxation as well as controlling the immobilisation involved in the freeze response.

Therefore, one can appreciate when Friedman (2007) references research which clarifies that “peripheral sympathetic nervous system activity, as well as its central

nervous system control architecture and neurotransmitter processes, all play a significant role in anxiety” (Friedman, 2007:186). He argues that the restraint of immediate, reflexive responses to achieve long-range goals is a key component of adaptive, flexible behaviour. In distinction to this, the rigid repetitive OCD actions may indicate a lack of inhibition of systemic response levels of anxiety. Many types of anxiety reflect a difficulty with blocking reflexive responses to threat that have perceptual (e.g., vigilance), cognitive (e.g., apprehension), behavioural (e.g., avoidance), affective (e.g., feelings of panic) and ANS (e.g., HR increase) features. “Disinhibitory” occurrences in anxiety result from positive feedback loops that increase repetitive actions at many functional levels. For example, the hallmark of Generalised Anxiety Disorder (GAD) is chronic worry (Thayer and Friedman, 2002). This process, common to many clinical forms of anxiety, epitomises the inability to control fear. As Friedman (2007) argues, perseveration is the failure to inhibit maladaptive responding.

2.6.2 The brain networks involved in the fear response and the link to OCD

The aetiology of OCD is multifactorial. Some studies present that OCD is the result of insufficient serotonin uptake in the brain (Bystritsky, 2004); the use of selective serotonin-reuptake inhibitors (SSRIs) is a main pharmacological method to treat OCD with studies reporting on the range of effectiveness of these (Bystritsky, 2004; Grant, Fineberg, Van Ameringen, Cath, Visser, Carmi, Pallanti, Hollander & Van Balkom, 2016; Sasson et al., 2005). Other studies have found impaired functioning in brain areas controlling flexible behaviour (University of Cambridge, 2008); problematic signalling between the orbital cortex, the caudate nucleus, the cingulate gyrus, and the thalamus (Schwartz & Beyette, 1997); dysfunctional prefrontal–striatal–thalamic circuitry; and evidence for involvement of (para)limbic circuitry (Huyser, Veltman, De Haan & Boer, 2009). A meta-analysis of functional MRI studies revealed that there are abnormalities in the orbitofronto-striatal circuit and in related limbic structures (e.g., amygdala), as well as in more lateral frontal and parietal areas of the brain (Menziés et al., 2008).

2.6.3 Fear and the amygdala

The proposition of this thesis is that, in trauma-based OCD, the undischarged or incomplete neurophysiological responses to negative stressors including fight, flight and freeze may be significant in the development of perseverative actions which are an attempt to control or minimise the experience of fear. Since at least the beginning of the 20th century it has been argued that the primal limbic brain structure central to managing neurobiological reactions to fear is the amygdala (Cannon, 1929, 1932; Davis, 1992; Davis & Whalen, 2001; LeDoux, 2014; Levine, 2010; Porges, 2014; Scaer, 1997, 2001). LeDoux (2015a) argues that the amygdala is responsible for detecting and responding to threats and only contributes to feelings of fear indirectly. His position is representative of the argument that the amygdala is definitively implicated in orienting responses to suggestive or relevant stimuli; these may also include instances that do not involve the experience of fear, such as when stimuli are experienced as subjectively arousing. LeDoux's research (2012, 2014) demonstrates that a crucial part of the amygdala, known as the central nucleus, contains links to the key brain stem areas that control the autonomic functions involved in the fear response, like quickening of breathing and heart rate. This results in the secretion of substances throughout the brain (norepinephrine, epinephrine, acetylcholine, dopamine, serotonin) and body (hormones such as adrenalin and cortisol) which engage system-wide defence mechanisms needed for fight or flight, the chemical counterparts of the polyvagal neural functioning.

2.6.4 The amygdala and the prefrontal cortex (PFC)

Critical for this study are the interconnections between the amygdala and other areas of the brain, notably the prefrontal cortex (PFC) and the orbitofrontal cortex (OFC). Current neurological findings further reinforce the argument that the mind and body are inextricably interrelated through the relationship between the prefrontal cortex (PFC) and limbic areas such as the amygdala as the PFC (especially the medial and orbital regions) appears to be responsible for many of the cognitive aspects of emotional responses. Recent studies suggest that the functional and the electrophysiological characteristics of the amygdala and the PFC overlap and are

inextricably connected to each other (Happaney, Zelazo & Stuss, (2004); Kringelbach 2005; Rolls, 2004; Schoenbaum, Takahashi, Liu & McDannald, 2011; Salzman & Fusi, 2010).

LeDoux (2015a and 2015b) argues that while the amygdala and the chemical surges alert the organism that something important is happening in the environment, it is the attentional structures in the neocortex which guide the perceptual exploration for an explanation. Furthermore, the actual interpretation of the stimuli is achieved through the stimulation of memories. If the stimuli are identified as dangerous, “fear” schema are activated from memory. LeDoux (2015a) argues for a differentiation between “non-conscious aspects of fear” (i.e. the detection of threats and initiation of body responses that respond to that) and “conscious fear” which he posits is a result of schema in the neocortex which label the stimulus (LeDoux, 2012, 2015a, 2015b). This distinction allows us to acknowledge the complexity of “triggers” for people with OCD: there appears to be both neural and chemical activation as well as sensory arousal which becomes linked with one or more particular events or factors and of which, some may actually be non-conscious and some of which may be conscious.

The more emotionally arousing the stimulus, the greater the limbic activation and the more pronounced the imprint and retention on the memory of the event (LeDoux, 2015b; Porges, 2011; Sieb, 2013):

Overall, the bidirectional communication between the amygdala and the OFC, as well as the connections with the rest of the PFC, provides a potential basis for the integration of cognitive, emotional, and physiological processes into a unified representation of mental states (Salzman & Fusi, 2010:178).

This is clearly illustrated below in the diagram of the closely situated and interrelated brain structures.

2.6.5 The role of the orbitofrontal cortex (OFC)

The OFC has particular neural circuitry connections with the limbic and paralimbic regions (the thalamus, basal ganglia and amygdala) and the sensory systems which

makes it highly relevant to OCD (MacMaster et al., 2010; Zald & Kim, 1996). According to Zald and Kim (1996), neuro-imaging studies have definitively linked the OFC in the pathophysiology of OCD: studies have found this area to be hyperactive in patients with OCD at both baseline and when exposed to triggers. These researchers posit that the OFC appears to make a unique contribution to OCD processes in that this neural area receives substantial sensory input from the cortical regions involved in the recognition of stimuli in all sensory modalities. This may begin to explain how sensory triggers gain emotional valence and become linked to obsessions and compulsions in OCD. The OFC is considered a key structure involved in sensory integration, in representing the affective value of re-enforcers and in decision-making and expectation (MacMaster et al, 2010; Rolls, 2004; Zald & Kim, 1996). Furthermore, the OFC seems to play a role in stimulating the expected rewards/punishments of an action within a particular situation (Schoenbaum et al., 2011). The brain is, thus, able to compare the expected reward/punishment with the actual result thereby making the OFC essential in adaptive learning.

Zald and Kim (1996:129) cite research linking the OFC to the amygdala and they maintain that the OFC is the region of the prefrontal cortex that is most strongly associated with the amygdala. The OFC appears to receive information from the amygdala and, in return, the OFC sends projections back to the basolateral and basal accessory nuclei of the amygdala (Menzies et al., 2008). Neuro-imaging research has identified the orbitofrontal cortex (OFC) as playing a significant role in OCD through its association with compulsive and repetitive behaviours (Gottlich et al., 2015; Menzies et al., 2008; Zald & Kim, 1996). Findings from functional, metabolic and structural imaging studies indicate that dysfunction in the orbitofronto-striatal circuit and associated limbic structures such as the anterior cingulate and amygdala contribute to the pathology of OCD (Huyser et al., 2009). According to Menzies et al. (2008), the data suggests that:

- (i) this circuit shows elevated metabolism in patients with OCD, particularly associated with expression of OCD symptoms and anxiety ...
- (ii) the OFC is consistently reduced in volume in OCD and
- (iii) that activation abnormalities are observed in these regions during fMRI in OCD patients compared with controls

... The causal relationship between these structural and functional observations is unknown, but interestingly functional brain changes have been shown to be dynamic and may normalise following therapeutic approaches which also reduce OCD symptoms and anxiety (Menzies et al., 2008:541).

Perry, Pollard, Blakely, Baker and Vigilante (1995) present that the human nerve cells “store” information in a fashion that is contingent upon previous patterns of activity. During a child’s development, the areas of the brain (i.e. cognitive, motor, emotional and “state”-regulating) become established in response to experiences and arousal patterns. Some element of previous experience is stored in the particular brain area. Furthermore, Perry (1999) posits that neuronal systems are primed to make associations when cues are linked or paired. This is a key principle underlying SE™: Levine (n.d.:B3.19) explains that in “traumatic coupling” the stress-inducing trigger becomes linked to a sensory or perceptual cue from any of the five basic senses resulting in “overcoupling” (over-association) or “undercoupling” (dissociation). These are used to try and keep activation levels decreased or controlled. According to Levine, “overcoupling” is an over-association or binding of two or more elements which involve sensations, images, behaviour, affect or meaning (SIBAM) in response to activation. Over-association makes sense in light of the argument presented throughout this chapter that the main driver of the mammalian brain is to promote survival and all neurobiological systems are engaged for optimal survival during threat. This associative capacity is part of the survival system in that it allows the brain to identify threat-associated sensory information enhancing rapid response action and, thereby, survival. However, this capacity may also support the development of “false” associations. Perry (1999) presents that associations become more complex as they link to different parts of the brain structure: they are most simple and categorical in the brainstem area; complexity increases in the amygdala area allowing for interpretation of emotional signals including facial expressions and intentionality. According to this argument, associations in the cortex are complicated, allowing for abstract connections between previously unpaired cues and meanings. Of critical import for this study is the understanding that a thought in the present time period may be linked to an original trauma, and becomes associated with the stored schema of neuronal

activation embedded in the structures. This may result in emotional, motor and level of arousal changes (Greenwald, Draine & Abrams, 1998, cited in Perry, 1999).

2.6.6 The effect of early trauma on the brain development of the child and adolescent

Lindquist, Wager, Kober, Bliss-Moreau and Feldman Barrett (2012) present that the vast majority of the critical structural organisation of the brain takes place in childhood: the emotional development which begins early in life has a critical impact on the overall brain architecture development with ongoing effects throughout life.

According to these researchers and many others, brain development is characterised by sequential development from the brainstem to the cortex and “use-dependent” organisation of the various brain areas. Therefore, emotional development, like memory development, is based on activity-dependent neurodevelopment and the emotional experiences and development of young infants occur most commonly during periods of interaction with a caregiver (National Scientific Council on the Developing Child, 2004). Neuroscience confirms that relationships underlie brain connections and those in closest contact with the child will have the most profound influence on the nature of brain growth and development (Perlman & Pelphrey, 2011). In simpler terms, significant experiences – with an emphasis on relational experiences with caregivers – encountered by the child have a marked influence on the organisation of the brain in terms of synaptic and neuronal connections. These would include the experience of marked stress or chronic trauma.

LeDoux (2015a) states that, on the most basic level, an emotion is comprised of the physiological, behavioural and affective aspects of differing intensity and prominence. According to Perry (1995), the brain senses the external and internal environment and stores elements of these sensations in a “use-dependent” fashion in order to optimise chances for survival. These sensations are transformed into neuronal activity (Kandel & Schwartz, 1982; Maunsell, 1995 cited in Perry, 1995). Furthermore, the brain stores associations from the sensory information (e.g., sights, sounds, smells) from that specific event allowing the individual to generalise to sensory information present to

other events. As discussed in section 2.6.3 above, sensory associations are central to OCD: neuro-imaging studies have definitively linked the OFC in the pathophysiology of OCD. Studies have found this OFC area to be hyperactive in patients with OCD at both baseline and when exposed to triggers (Zaid & Kim, 1996).

Depending on the valence of the data, an affective feature is added to the experience to produce emotion. According to Marin (1999) cited in Sieb (2013), the amygdala plays a foundational role in the creation of memories linked to emotional events. Furthermore, the amygdala seems to influence and control memory integration in other brain regions such as the hippocampus. Emotional arousal increases amygdala activation immediately after an event which intensifies retention of the memory of that event; the more emotionally charged the event, the greater the activation of the amygdala and the more intense the retention of the memory of the event.

Affective valence is considered to be a part of the emotional meaning of a sensory stimulus and initiates the start of an emotion (Sieb, 2013). According to Kissin (1986) and Joseph (1990, cited in Sieb, 2013), the development of affective valence begins early in development and certainly before a sensory stimulus is consciously understood. Affective valence is, therefore, quite primal at subcortical levels but may develop into more advanced affective positions at more advanced limbic and neocortical levels. The affective valence systems act closely with the reticular activating system (RAS) for the management of attention and consciousness. Sieb (2013) refers to Kissin's (1986) identification that affective valence is developed by the neurological reward and punishment systems which can facilitate or inhibit further stimulus processing at the brainstem, thalamic and cortical levels. Activation of the reward system has arousal, alerting and facilitating effects; activation of the fear-based system has inhibiting, avoidance and negative effects. Sieb (2013) further explains that the fear-based, punishment system is made up of limbic systems involved in memory and negative emotion (septal nuclei, amygdala, medial hypothalamus, frontal cortex). Activation of the punishment system also stimulates the reticular activating system (via the amygdala, hypothalamus, thalamus, reticular formation, septal nuclei). The punishment system has inhibiting physiological effects, generates negative emotion and produces avoidance or aggressive behaviour. Sieb (2013) explains that

the individual works to diminish further stimulus processing and response and may enter a state of latency and behavioural inhibition or aggression.

Twardosz and Lutzker (2010) posit that the neurons of the human brain change in reaction to signals from the external environment, including those of traumatic events. In terms of the attachment paradigm, Van der Kolk (2005a) explains how early patterns of attachment inform the quality of emotional processing and memories throughout life. The characteristics of the child's caregiver and relational context impact the child and become internalised affecting neural development and the developing brain. Children learn to regulate their autonomic nervous system through expectations in response to their caregivers' emotional reactions to them which lets them create what Bowlby (1969:10) called "internal working models". A traumatic incident and the subsequent influence on the organisation of the child's brain has a much more acute influence because the undeveloped brain is still forming in response to feedback from the environment.

Scientific research indicates that the development of emotion and cognition relies on the development and integration of intricate brain circuits in multiple areas including the prefrontal cortex, limbic cortex, basal forebrain, amygdala, hypothalamus, and brainstem (National Scientific Council on the Developing Child, 2004). Furthermore, pathways involved in the regulation of emotion are highly integrated with those associated with "executive functions" such as formulating and decision-making as well as the development of problem-solving skills during the preschool years (National Scientific Council on the Developing Child, 2004). When a child experiences trauma in the presence of an emotionally dysregulated caregiver, the child's response will also be dysregulated. According to Twardosz and Lutzker (2010) if the caregivers themselves are the source of the distress, there is a breakdown in the child's capacity to process and integrate what is happening. This would seem to be the freeze response which was discussed above, as the core of traumatic stress is a breakdown in the capacity to regulate internal states. Furthermore, if the distress does not abate, children cannot associate the related sensations, affects and cognitions leading to dissociation.

Numerous reviews that relate neuroscience research to child maltreatment have focused on the link between maltreatment and the dysregulation of the nervous system (e.g., Bremner, 2005; National Scientific Council on the Developing Child, 2014; Nemeroff, 2004; Teicher, Anderson, Polcari, Anderson, Navalta & Kim, 2003; Van Voorhees & Scarpa, 2004). According to Van Voorhees & Scarpa (2004), this can predispose the nervous system to depression, anxiety, and other mood disorders in childhood and adulthood as well as a number of health problems. Based on a number of reviews, Twardosz and Lutzker (2010) go on to state that the conclusion from multiple sources of evidence which they summarise indicates that mistreatment during childhood, in conjunction with genotype, produces dysregulation of the nervous system while it is still developing so that it is prone to overreact throughout life, increasing the individual's risk of developing mental health problems. This is reinforced by the National Scientific Council on the Developing Child (2014) which presents that studies show that when children have elevated cortisol levels for prolonged periods of time this alters the function of a number of neural systems, suppresses the immune response and impacts on the architecture of regions in the brain that are essential for learning and memory.

Childhood and adolescence are defined by significant neurochemical, structural and functional changes across neurology and physiology. Anderson (2016:239) succinctly describes this: "Events that occur during critical periods lay a foundation and later influences of the environment during a sensitive period shape the final trajectory". The paradigm of critical periods occurs in concert with active brain growth where the increase of neural infrastructure (neurons, glia) shapes and guides development and "locks it in" (Hanover, Huang, Tonegawa & Stryker, 1999, cited in Anderson, 2016). Critical periods are vital for the foundation of the brain and are also when the brain is uniquely sensitive to environmental impacts.

The adolescent brain is well known for the increased expression of dopamine in the prefrontal cortex (PFC) which is instrumental in increasing motivational salience which heightens behaviours such as elevated novelty preferences and impulsivity (Brenhouse & Anderson, 2008 cited in Anderson, 2016). What is also pertinent to this study is that – using the salience factor – associations formed by the adolescent

between a behaviour and the environment are more difficult to change compared with other maturational stages. (Baker, Bisby & Richardson, 2016). Baker et al. (2016) report on how elimination of fear-related stimuli is significantly compromised during adolescence increasing the possibility that associations which occur before or during adolescence will become an integral part of the individual's functioning. Changes in brain structure following early life stress have been linked to different delicate periods in the brain; the resulting influence is most pronounced if the abuse occurs during those times (Andersen, 2016).

The development of executive function and self-regulatory skills is interconnected with the growth of the prefrontal cortex from childhood into adolescence and young adulthood (Lenroot & Giedd, 2006). However, because of the intricate relationship that neural circuits have with deeper brain structures, the developing executive functioning both influences, and is affected by, a young child's control of strong emotions. Therefore, chronic exposure to frightening or stressful situations can disrupt the development of the prefrontal cortex and compromise working memory and attention. Underlying dysregulation of emotions and actions have been found to exacerbate these imbalances and may contribute to an increased risk for mental illness (Lenroot & Giedd, 2006). Early relationships characterised by increased stress and dysregulation are believed to play a significant role in the development of obsessions against intrusive thoughts (Doron & Kyrios, 2005).

In summary, there is a plethora of research on brain development to show that the experience of trauma by the child and adolescent is highly pertinent to the developing brain. Data from the discipline of developmental neuroscience suggest that the CNS is more malleable early in development and may be more intensely influenced by occurrences during these periods. Early stress appears to produce long-term changes in various neurotransmitter systems (Nemeroff, 2004). Furthermore, research findings using adult survivors of childhood abuse confirm the supposition that individuals who experience childhood trauma are increasingly sensitive even in response to slightly negative events in adulthood; this fosters a propensity for the development of mood and anxiety disorders (Nemeroff, 2004).

2.7 CONCLUSION

The literature review in this section has attempted to show the veracity of empirical neurophysiological research which demonstrates that trauma resides in the autonomic nervous system. It has been shown that, through the vagus nerve (which is both efferent and afferent), stress or trauma and fear are experienced in the “mind” as well as the body and there is a complex inter-relationship between these (Porges, 2001, 2003, 2011; Scaer, 1997, 2005; Schore, 1994). I have attempted to bring research to support the argument that stress triggers in the environment can alert the sympathetic and parasympathetic nervous systems to involuntary action in order to safeguard the organism. It has been shown that the intense responses involved in fight, flight and freeze have an extreme effect on neurophysiological systems resulting in dysregulation of the complex dynamical system formed by the subcortical autonomic, limbic, motor and arousal systems (Payne, Levine & Crane-Godreau, 2015; Porges, 2011).

I have attempted to show that, although the aetiology and course of OCD is complex and multi-faceted and implicates many factors (neurology, genetics, temperament, neurotransmitters, parenting style, preceding trauma and more) other research in this section has elucidated that trauma has been found to precede many cases of OCD (Benedetti et al., 2014; Borges, et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999, 2001; Gershuny et al., 2003; Lin et al., 2007; Lochner et al., 2002). OCD is strongly characterised by fear as well as sensory associations which may well underlie many of the compulsive actions. This is clarified in the significant role played by the amygdala, the “fear centre” (Davis, 1992, 1997; Davis & Whalen, 2001) and the OFC (Kringelbach 2005; Rolls, 2004; Schoenbaum et al., 2011; Zald & Kim, 1996). This thesis has also presented the possibility that compulsive actions may be the result of incomplete neurophysiological defensive actions linked to the fight, flight and freeze reactions.

The argument of this thesis has attempted to open an additional avenue in understanding treatment choices for OCD. In light of this, I have utilised Peter Levine’s argument that undischarged residual traumatic energy remains trapped in the nervous

system and that trauma – and the lack of release of the this energy – may result in a person feeling driven to perform an action or thought in order to complete the defensive action and to neutralise the fear. As discussed above, this may be intensified in children where cognitive and psychosocial development in certain stressful environments leads to the holding onto of self-blaming beliefs or thoughts of inadequacy which may intensify the traumatic experience. Through association, a sensory trigger is linked with an emotionally traumatic experience and a perseverative action is part of the neurobiological attempt to complete the discharge. The behaviour may decrease the anxiety momentarily but only temporarily (Cromera et al., 2007), hence the triggering of compulsive actions characteristic of OCD.



CHAPTER 3

OCD, CURRENT TREATMENT APPROACHES AND SOMATIC EXPERIENCING™ AS AN APPROACH FOR TRAUMA-BASED OCD

3.1 OCD AS A DISORDER LINKED TO BOTH ANXIETY AND TRAUMA

In line with the thesis of this study, it seems fitting that OCD has been given its own chapter in the DSM-5 between the ‘Anxiety Disorders and Trauma- and Stressor-Related Disorders’ (APA, 2013:189). It is now placed within its own chapter of ‘Obsessive-Compulsive and Related Disorders’ (OCD) which includes body dysmorphic disorder, hoarding disorder, trichotillomania, and excoriation disorder. To be considered as an OCD, a disorder must:

- be characterized by obsessions and/or compulsions that cause distress and/or interference;
- meet at least three of these five criteria:
 - Phenomenology (a) Obsessions and/or compulsions, (b) Course
 - Comorbidity
 - Family history
 - Fronto-striatal brain circuitry, i.e. caudate hyperactivity
 - Treatment response;
- meet at least one of the two criteria that reflect underlying aetiology (either family history or pathophysiology involving the fronto-striatal circuitry with caudate hyperactivity) (Hollander, 2005)

According to Zohar and the Cape Town Consensus Group (2006), cited in Hollander et al. (2008), research has shown that obsessions and compulsions exist in OCD and in other OCDs, and that these disorders “share features such as phenomenology, comorbidity, neurotransmitter/peptide systems, neurocircuitry, family history and genetic factors, and treatment response”. Hollander et al. (2008) posit that an advantage of this change is that it aims to enhance treatment options for the OCDs and facilitate the development of somatic treatments amongst other goals such as

“increasing accessibility to insurance, and influencing research funding agencies to consider these disorders worthy of funding”.

The sequential order of the chapters in the DSM-5 reflects the close relationships between trauma and anxiety in the aetiology of OCD. It is instructive that the ICD-10 places both OCD and the anxiety disorders under the umbrella category of “neurotic, stress-related, and somatoform disorders” (ICD-10, 2016). While the role of anxiety in OCD has been extensively studied, it is posited that the fear and trauma dynamic has been less acknowledged and that further insight into this will inform psychotherapeutic treatment options.

Borelli, Ruiz, Crowley, Mayes, De Los Reyes & Lewin (2015) posit that OCD symptoms are fundamentally focused on danger-detection processes – for instance, obsessions usually pertain to threat (contamination, injury, social exclusion), whereas compulsions are aimed at removing the threat. Furthermore, there is research linking fear responses in the brain with OCD circuitry (Dykshoorn, 2014; Gottlich et al., 2015; Sasson et al., 2005) as detailed in Chapter 2: section. 2.7. The APA (2013:189) clarifies that “(f)ear is the emotional response to real or perceived imminent threat, whereas *anxiety* is anticipation of future threat”. It continues to explain that fear is more often “associated with surges of autonomic arousal necessary for fight or flight, thoughts of immediate danger, and escape behaviours, and anxiety more often associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviours”. Borelli et al. (2015) present that patients with severe OCD have such hypervigilance towards threat processing that they may be unable to distinguish between threat and non-threat contexts.

Based on the significant role of fear or trauma which has been indicated in the ICD-10 and the DSM-5, this study posits that there is a place for a category of trauma-based OCD which is closely preceded by trauma. In such cases, an additional or alternative treatment methodology may be useful. This study will, therefore, explore the value of Somatic Experiencing™ (SE™) in addressing the core aspects of OCD which are linked to trauma. Obsessions and compulsions may be a way of attempting to manage

ongoing experiences of anxiety, stress and fear with attempts to discharge the arousal (even though these means are dysfunctional in the present).

3.1.1 OCD and trauma

Many people with OCD have dysfunctional beliefs linked to the overestimation of threat (APA, 2013:238) and fear of something impending and dreadful happening. Linked to this is an inflated sense of responsibility to avert this occurrence or phenomenon. Mathews et al. (2008) identify an indirect related factor with the personality facet of conscientiousness. Barrett et al. (2002) and Kamali, Looyeh and Rashid (2014) identify a direct link between obsessive-compulsive symptoms and dysfunctional parenting styles related to emotional abuse such as over-control, high expressed emotion and emotional rejection.

3.1.1.1 Understanding obsessions and compulsions from the neurophysiological trauma perspective

In Chapter 2, it was presented that the preoccupation with obsessional thoughts and the compulsions connected to these can be more accurately understood if the neurophysiological experience of trauma is fully acknowledged. The physiological response to acute stress is being more closely studied and these show that critical survival circuits are activated in preparation for fight or flight (and may also include the freeze response when neither fight nor flight is possible) when traumatic events are experienced. For example, adrenaline and other hormones are released quickly in the body (with effects on digestion, reproduction, cell repair and other body tasks), increased blood sugar provides extra energy for muscles, blood pressure increases, surges in endorphins and cortisol ward off feelings of pain and inflammation, blood is diverted from the extremities to major muscles to provide the means for fight or flight etc. Furthermore, what was presented in Chapter 2 was that this physiological activation needs to “run its course” so to speak allowing for the neurophysiological release, regulation of the body systems and re-establishment of the physiological sense of safety. When this release process does not occur (for reasons presented in

the Chapter 2), the result may be impeded or diverted repetitions of the action which become the compulsive behaviours.

Based on these findings, it is posited that when OCD develops after trauma, an aetiologically distinct subtype of OCD may exist (Sasson et al., 2005). Most critical, for the thesis of this study, is the theoretical perspective which is supported by neurobiological research (Porges, 2011) which identifies the binding of physiological survival energy with environmental triggers to produce maladaptive behaviours. It is proposed here that the role of compulsion is, in fact, an attempt to find a neurobiological discharge for the experience of stress in the body. As summarised in the Polyvagal Theory, *neuroception* (the ability of the senses to sense safety or danger and to initiate responses in the nervous system) initiates the involuntary impulses of the sympathetic nervous system (fight-or-flee response) and the parasympathetic nervous system (freeze response) and that these – along with the more phylogenetically current social engagement system – form the basis of our self-protective neurobiology (Porges, 2011, 2014).

It is presented here that in individuals who develop OCD in response to acute stress or trauma, the physiological experience of trauma has a significant effect on the development and maintenance of what is felt to be (by the person) protective thoughts and actions. To support this approach, studies have also identified a higher rate of dissociation in people with OCD (Selvi et al., 2012) which is instructive in light of the research linked to the fight, flight and freeze response as presented in Chapter 2 and the element of dissociation involved in the freeze mechanism. A number of studies report that, in general, there are extreme fear-based beliefs in response to specific (often seemingly innocuous) stimuli or thoughts, and rituals or compulsions are used in order to attempt to banish the thoughts.

According to Friedman (2007), who cites Barlow (1988), anxiety is rooted in fear and its manifestation is the preparation to flee. Rachman (1997:793) presents that “obsessions are caused by catastrophic misinterpretations of the significance of one’s intrusive thoughts”. Furthermore, while the content of typical and atypical or obsessional thoughts are quite similar, the intensity differs because of the meaning

attached to obsessional thoughts. Rachman explains that, “obsessions last longer, are more intense, more persistent, cause more distress, and create more lasting impact on the individual” (Rachman, 1997:793). Rachman (2002) argues further that the more stressful the experiences, the greater the dysregulation or distress the individual will feel, and the greater the frequency of intrusive/obsessional thoughts.

Sasson et al. (2005) present that OCD is strongly correlated with increased responsibility, significant losses and the number of stressful events during the year preceding onset. Khanna et al. (1988) found that the increased number of stressors appeared to be less controllable compared with events occurring in the control group. Borges et al. (2011) found that adolescents who had experienced more undesirable life events (as measured by the Coddington Life Events Scale for Adolescents), were at higher risk for developing OCD later in life. Studies by Boudreaux et al. (1998) and Maes et al. (2000) cited in Borges et al. (2011) found a significant link between abuse, PTSD and the development of OCD in the general population: “Although physical or sexual trauma may contribute, emotional trauma (abuse or neglect) is likely to be the most relevant factor in the development of clinically significant OCS” (Mathews et al., 2008:748).

Rachman (1997) posits that compulsions may result from an individual believing that he or she has a special responsibility to prevent unwanted events from occurring and, in light of the focus of this study, it is presented that children may be developmentally primed to take on increased feelings of blame and self-responsibility. Briggs and Price (2009) identified that children with a predisposition towards anxiety and/or depression before the traumatic experience, are more likely to develop OCD. Furthermore, trait anxiety in the family structure appears to be a significant factor in influencing the child's ability to regulate their own anxiety. If caregivers are unable to manage or cope with distress and to model distress tolerance, children are likely to develop maladaptive coping techniques as a way to control their sense of distress. Obsessions and compulsions are one way to manage these (Dykshoorn, 2014). Studies indicate that people who develop trauma-based OCD can identify one or more critical events related to the development of the disorder: “Betrayal is a sense of being harmed by

the intentional actions, or omissions, of a person who was assumed to be ... trusted” (Rachman, 2010:304).

According to the DSM-5, individuals with OCD often have other psychopathologies: “Many adults with the disorder have a lifetime diagnosis of an anxiety disorder ... or a depressive or bipolar disorder” (APA, 2013:242). This is understandable considering that OCD has been linked to experiences of trauma as presented in numerous studies (Borges, et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999; 2001, Lin et al., 2007; Lochner et al., 2002). De Silva and Marks (1999, 2001) amongst others (Gershuny et al., 2003) reported cases of trauma-induced OCD which indicated comorbidity between OCD and PTSD. These two disorders have a strong overlap due to symptoms of intrusive and unwanted thoughts along with rituals and avoidance behaviour developed to avoid fear-based thoughts (Mathews et al., 2008).

Dykshoorn (2014:521) posits that, “Evidence was collected for a post-traumatic OCD and treatments of trauma-related OCD were considered. OCD and traumatic histories have a significant enough overlap that trauma should be a consideration when treating an individual with OCD.” Sasson et al. (2005) examined the co-occurrence of PTSD and OCD in soldiers after exposure to combat. In these cases, there was poor response to treatment among all cases and the researchers hypothesise that OCD stemming from trauma is a distinct type. Therefore, according to the thesis of this study, the physiological effects of acute stress or trauma may have a direct link to the subsequent development of OCD and, therefore, a treatment methodology which is aimed at treating trauma may form a critical adjunct to the classical treatment options for OCD.

3.1.2 The case for developmental trauma

As discussed in Chapter 2, trauma can mean many things depending on the person’s developmental stage. In light of Van der Kolk’s (2005, 2014) argument for a category of ‘Childhood Developmental Trauma’, research shows that even failure to establish secure attachment bonds, loss of a consistent caregiver and chronically mis-attuned caregiving can result in significant internal dysregulation. According to Mathews et al.

(2008), emotional abuse or neglect in childhood is a relevant factor in the development of clinically significant obsessive-compulsive symptoms (OCS) in childhood and adolescence. Parenting styles (Barrett et al., 2002) and personality factors also have been found to play a role in the development of OCD in children. According to studies (Aojula, n.d.; Barrett et al., 2002; Timpano, Keough, Mahaffey, Schmidt & Abramowitz, 2010), authoritarian parenting styles and behaviour are strongly related to the development of anxiety in general and OCD in particular. Furthermore, Gallagher and Cartwright-Hatton (2008), cited in Timpano et al. (2010), found that volatile or extreme parental discipline anticipated greater tendencies of both cognitive distortions (e.g., catastrophising, selective abstraction) and metacognitions (e.g., 'I constantly study my thoughts' or 'I do not trust my memory')".

Parenting that disregarded the emotional needs of the child and was characterised by decreased levels of care and empathy was strongly linked to the disorder. Additionally, controlling parenting, expressed in high levels of control and high levels of criticism, was associated with obsessive behaviours in children. These parenting styles were thought to cause impulses to decrease fear as they triggered feelings of fear and anxiety. Research indicates that approximately half of all adults with OCD experienced clinical symptoms of the disorder during their childhood (Briggs & Price, 2009; Cromera, Schmidt & Murph, 2007; Dykshoorn, 2014). Therefore, the focus in this study is on OCD during the stage of late childhood or adolescence.

In summary, the argument of this thesis has attempted to open an additional avenue in understanding treatment choices for OCD. It is essentially linked to Peter Levine's argument that undischarged residual traumatic energy remains trapped in the nervous system and the lack of release of the trauma may result in a person feeling driven to perform an action or thought in order to complete the defensive action and thereby neutralise the fear. As discussed above, this may be intensified in children where cognitive and psychosocial development lends itself in certain stressful environments to the holding onto self-blaming beliefs or thoughts of inadequacy which may intensify the traumatic experience. Through association, a sensory trigger is linked with an emotionally traumatic experience and a perseverative action is part of the neurobiological attempt to complete the discharge. The behaviour may decrease the

anxiety momentarily but only temporarily. In the long run, the rituals worsen OCD severity and prompt the obsessions to return (Cromera et al., 2007).

3.2 TREATMENT APPROACHES FOR OCD

The development of empirically based treatments for OCD has gone through many phases and has been informed by several practices. According to Twohig, Whittal, Cox and Gunter (2010), initial cognitive conceptualisations of anxiety disorders were based on Beck's (1976) and Ellis' (1962) understanding of inaccurate cognitions. In this vein, Salkovskis (1985:571) posits that "obsessional thinking is the archetypal example of a cognitive disorder in the neuroses", and continues to explain that a major factor in OCD is the inflated belief "in the responsibility of being the cause of serious harm to others or self" (Salkovskis, (1985:575). A second factor is that the person "interprets the occurrence of intrusive thoughts, images, impulses and doubts" as threatening (Salkovskis 1985). Treatment responses have, to a large extent, extended from this factor.

3.2.1 Cognitive Behavioural Therapy

The first line of treatment for OCD is Cognitive Behavioural Therapy (CBT) (Gottlich et al., 2015; O'Neill & Feusner, 2015). This is a widely accepted treatment for OCD and has been established by studies as an effective, evidence-based treatment for OCD (Cottraux, Note, Yao, Lafont, Note, Mollard, Bouvard, Sauteraud, Bourgeois & Dartigues, 2001; O'Neill & Feusner, 2015; Gottlich et al., 2015; O'Neill & Feusner, 2015).

According to Salkovskis (1985), negative automatic thoughts are typically underpinned or linked to beliefs concerning responsibility or blame for harm to self or others. "Obsession-provoked automatic thoughts or images revolve around personal responsibility, the possibility that if things go wrong it might well be the persons' own fault." Furthermore, "Such responsibility may be indirect as well as direct, so that the possibility of preventing harm caused by external agents is equally potent. Clearly,

such ideas of responsibility would lead to self-condemnation in vulnerable individuals” (Salkovskis, 1985: 574).

Salkovskis (1985) described a cognitive theory of OCD based on the understanding that invasive thoughts and impulses are misinterpreted in ways which encourage the person to suppress the impulse and attempt to counteract the upsetting effects of the thoughts through thoughts or behavioural compulsions. A core argument in this model is that the flawed evaluation, which defines OCD, fosters the version of inflated subjective accountability for happenings that will result in harm to oneself or to others. Faulty appraisals are thought to derive from maladaptive assumptions learned over the life course. Salkovskis (1985) presents that the faulty appraisals are probably best summarised in terms of Beck’s (1976) concept of “dysfunctional assumptions”.

Dysfunctional assumptions most likely to interact with intrusive thoughts include:

- having a thought about an action is like performing the action;
- failing to prevent (or failing to try and prevent) harm to self or others is the same as having caused the harm in the first place;
- responsibility is not attenuated by other factors (e.g. low probability of occurrence);
- not neutralising when an intrusion has occurred is similar or equivalent to seeking or wanting the harm involved in that intrusion to happen;
- one should (and can) exercise control over one’s thoughts.

According to McLean, Whittal, Thordarson, Taylor, Söchting, Koch, Paterson & Anderson (2001) there are six types of faulty appraisals: “(a) over-valuing of thoughts, (b) over-estimation of danger, (c) inflation of responsibility, (d) over-estimation of the consequences of danger, (e) over-estimation of the consequences of responsibility, and (f) need for certainty, control and perfectionism.”

The core principle of CBT is that alternative appraisal is necessary in order to learn to control these destructive patterns. Cognitive treatment for OCD usually includes challenges to inflated responsibility, re-assessing overestimation of threat, decreasing of the need to control thoughts as well as perfectionism and certainty. Alternative non-

threatening interpretations are developed in treatment and evidence for them is collected through a variety of strategies such as challenging. CBT is based on the idea that problems are not caused by situations themselves, but by how the person interprets them and thinks about them (McLean et al.). The person uses neutralising in order to reduce the discomfort which fosters the development of obsessional behaviour as a strategy for coping with stress.

In order to treat this dysfunctional pattern of behaviour, four primary techniques are often utilised although the frequency and duration of sessions differs based on the disorder and symptom severity. These include:

- Psychoeducation: the therapist explains the rationale for the proposed approach explaining how errors in thinking about obsessions and compulsions occur.
- Cognitive restructuring: the therapist assists the client to identify common thinking misconceptions or cognitive distortions (such as overestimation of negative consequences). Using an approach based on testing and verifying responses in the real world, the client is guided to re-interpret situations.
- Self-monitoring: this is usually introduced in the first session and closely monitored throughout the course of treatment; clients are guided to be observant of their reactions and keep careful records.
- Relaxation training: muscle relaxation techniques are used to down-regulate raised physiological tension and to lower the intensity of autonomic functioning. For example, patients deliberately tense muscle groups in a systematic manner and then relax them; breathing exercises focus on correct breathing techniques to regulate heart rate etc.

The aim of CBT is to correct defective thought processes. Through awareness of the obsessive and fearful interpretation of stimuli, the person is taught to reassess and challenge their evaluations and habitual beliefs (Foa et al., 2009). As Rachman (1997:795) puts it:

Education about intrusive thoughts, normalisation of the intrusive thoughts, recollection of and recording of the experienced intrusive thoughts, and, finally, the construction of new, adaptive, and appropriate interpretations (through

identification of situational exceptions, alternative interpretations, and disproving evidence) are important steps in the treatment process.

According to O'Neill & Feusner (2015:214), intensive daily CBT is highly effective for OCD with response rates of 50%–70%. In contrast to serotonin-reuptake inhibitors (SRIs) or other drugs, moreover, CBT has faster initial response; a response that typically persists past the end of treatment (ideally, for life). Furthermore, through CBT, a patient acquires self-mastery, insights and life skills.

3.2.2 Exposure and Response Prevention (ERP) Therapy

ERP is a treatment approach which frequently augments CBT approaches. In ERP, the purpose of repeated exposure is conditioning whereas CBT is primarily aimed at altering a cognitive appraisal with the identification of more realistic and adaptive appraisals being the goal (McLean et al., 2001). ERP aims to change behaviour through exposing the client to the feared stimulus in a controlled manner so that he or she is increasingly able to tolerate the negative effect and autonomic arousal that accompanies the images (Cottraux et al., 2001; Foa et al., 2009; Nestadt et al., 2003). Meyer (1966) was one of the first clinicians to report success with OCD clients using exposure and response prevention. A hierarchy of fear-inducing situations or objects is created between the therapist and client and, gradually, exposure is implemented. The therapist assists the client to manage systematic exposure moving up the identified fear hierarchy once anxiety has plateaued at a mild level (Twohig et al., 2010).

According to McLean et al. (2001) exposure techniques can vary and include the following:

- Imaginal exposure: Specified to tolerate negative effect and autonomic arousal symptoms that accompany fearful images.
- In vivo exposure: Clients confront the feared stimulus in a safe and controlled manner. This method is emotionally taxing and may engender refusal.

- Virtual reality exposure (VRE): VRE allows the client to experience the phobia with computer stimulation. VRE is frequently used for phobias that are expensive to reproduce (e.g. flying), (cited in McLean et al., 2001:208).

CBT works with ERP by assisting the client to confront cognitive distortions or mistaken beliefs and to change their behaviours or compulsive actions (Cottraux et al., 2001; Foa et al., 2009; Nestadt et al., 2003.; Toro et al., 1992). It is further argued by some that an error detection happens in the brain: Schwartz (1996) speaks about the error detection circuit in the OFC which is locked in the “on” position, very much like a stuck record. The result is the continuous bombardment of troubling feelings. ERP aims towards desensitising the client to the severity of these feelings.

More recently, treatment has started to emphasise *mindfulness* and *cognitive restructuring*, that is the client’s ability to observe their obsessional thoughts and to make choices about how to respond through enlightened awareness. This is sometimes referred to as Mindfulness-Based Behavioural Therapy or MBBT (Gorbis, Molnar, O’Neill, Yip, Sterner, Kitchen & Saxena, 2007). According to Gorbis et al. (2007), OCD symptoms are associated with evasion of the present moment and focusing one’s attention on either the past or the future; attachment to particular outcomes and efforts at controlling versus allowing life to unfold, reactivity in response to inaccurate thoughts, obsessions and critical judgments about the self and OCD symptoms. They present that meta-analyses suggest that integration of formal mindfulness training decreases distress, such as that found in OCD, across multiple mood and anxiety disorders (Baer, 2003). Schwartz (1996), discusses how mindfulness is bringing awareness to an internal feeling without responding to it through critical judgements. He presents that the client must learn to re-attribute the feelings to a medical condition (i.e. “brainlock”) and to not blame themselves for it; and, finally, in order for the client to separate themselves from the obsession they need to consciously focus on something else.

3.2.3 Pharmacotherapy treatment

Antidepressant medications are the most widespread pharmacological means used for the treatment of anxiety-related disorders. According to studies, approximately 70%

of patients can experience symptomatic relief with appropriate pharmacotherapy (Kellner, 2010; Pittenger & Bloch, 2014). Serotonergic antidepressants, such as selective serotonin reuptake inhibitors (SSRIs) and clomipramine, are the established pharmacologic first-line treatment of OCD. These are typically used at higher doses and for longer periods than in depression. When these do not ameliorate symptoms sufficiently, augmentation with antipsychotics is sometimes the second line of pharmacological treatment. The combination of the antipsychotic medication risperidone, haloperidol, olanzapine, or quetiapine with an SSRI was shown to be more effective than SSRI monotherapy in treatment-resistant cases (Kellner, 2010). The combination of medication with psychotherapy is often used, though OCD refractory to available treatments remains a profound clinical challenge (Pittenger & Bloch, 2014).

3.2.4 The case for targeting trauma in treatment

Researchers have approximated that the number of OCD participants who are able to recover from OCD or be effectively treated by behavioural therapy through to long-term follow-up stands at about 55% (Stanley & Turner, 1995). Authors Krebs and Heyman (2010) state that OCD affects about 1% of children under 18 years. In most cases – about 80% – selective SSRIs and CBT alone or in combination are effective; however, about 20% or more of cases are treatment resistant. In these cases, they recommend looking more closely at barriers to treatment including comorbidities, inadequate CBT or medication, or family factors. In presenting the case for a trauma-related OCD, Dykshoorn (2014:526) puts forward the argument for CBT treatment based on the argument that this therapy is frequently successful with OCD: “The conceptual similarities between OCD and trauma-related distress (i.e. betrayal, intrusive thoughts, maladaptive appraisals, and behavioural neutralizing responses) provide evidence for OCD and trauma being very similar in presentation, course, and treatment.” Yet, there are studies which report mixed results after the use of these methodologies (Dykshoorn, 2014; Huyser et al., 2009; O’Neill & Feusner, 2015; Semiz et al., 2014).

The DSM-5 states in the Introduction that “the boundaries between many disorder ‘categories’ are more fluid over the lifetime ... and many symptoms assigned to a single disorder may occur, at varying levels of severity, in many other disorders” (APA, 2013:5). Clinical studies demonstrated that individuals seeking treatment for resistant OCD reported more severe traumatic experiences and a previous diagnosis of PTSD in these clients, led to an inferior treatment outcome (i.e., no change or a worsening of symptoms) than for those without comorbid PTSD (Semiz et al., 2014).

3.2.4.1 A trauma-based approach: Somatic Experiencing (SE™)

Here’s one of the more unusual and problem-creating symptoms that can develop from unresolved trauma: the compulsion to repeat the actions that caused the problem in the first place. We are inextricably drawn into situations that replicate the original trauma in both obvious and less obvious ways. (Levine, 2008:20).

Levine (n.d.:B1.7) explains how traumatic stress symptoms arise when normal regulatory mechanisms are interrupted. When activation takes place too quickly or too soon, normal resiliency is overwhelmed and overactivation results. Overactivation of the sympathetic nervous system leads to the survival symptoms of increased heart rate, shallow breathing, muscular tension, exaggerated startle response, chronic pain and inability to relax; emotional and mental symptoms include anxiety, panic attacks, rage, mania, hyper-vigilance and worry.

Overactivation of the parasympathetic nervous systems leads to the physical symptoms of exhaustion, numbness, poor digestion, low heart rate and poor immune system function; mental or emotional symptoms include depression, dissociation, apathy and disconnection in relationships. When both branches are over-activated simultaneously, this results in anxiety underlying depression, muscle rigidity and low muscle tone in different parts of the body and diarrhoea alternating with constipation.

In line with this approach, the thesis of this study is that childhood trauma (that which is experienced as traumatising for the child at his or her developmental stage and

which may include attachment trauma) is experienced as “end-stage survival” threat by the child or adolescent. This leads to overactivation of the sympathetic and/or the parasympathetic nervous systems. Over-coupling and under-coupling are key survival strategies and work as primary coping mechanisms to keep the autonomic nervous system from moving into overwhelm, fragmentation, hyper-arousal and dissociation (Levine, n.d.:11.12). In this study, it is posited that this may be a significant factor underlying the onset of childhood and adolescent anxiety and even OCD. If this is so, this needs to form the main focus in treatment in conjunction with other treatment approaches, in order to resolve obsessive-compulsive thoughts and behaviour. This study furthermore introduces the hypothesis that the repetition compulsion characteristic of OCD may be linked to a thwarted or incomplete biological impulse of the CNS, albeit through the inclusion of the cerebral cortex which may link to challenges with set shifting (Borges et al., 2011), over-association and over-thinking.

3.3 SE™ METHODOLOGY

The SE™ approach contrasts with cognitive therapies in that its major treatment approach involves working from the body up to the cognitive understanding; this is done by directing the client's attention to internal sensations, both “visceral (interoception) and musculo-skeletal (proprioception and kinesthesia)” (Payne et al., 2015). According to an online interview with Peter Levine (Yalom & Yalom, 2010):

In top-down processing, which is normally what we do in psychotherapy, we talk about our problems ... or our relationships. And then the therapist often tries to get the client to feel what they're feeling when they talk about those kinds of things. Or they try to work with them to become more aware of their thoughts so that they can change their thoughts. In this model the language that you're talking with the client is in the realm of symbols, of thoughts, of perceptions. The language of the emotions is the language of the emotional brain – the limbic system. And in order to change emotions, people have to be able to touch into the emotions, to express the emotions.

In distinction to treatment approaches such as CBT and ERP, SE™ facilitates the gradual release of traumatic energy stored in the autonomic nervous system while creating corrective interoceptive experiences that physically counterweigh those of immobility and helplessness. In this way, attention to physical activation and release in order to return to equilibrium can support the resolution of symptoms resulting from traumatic stress. Interestingly, if trauma does play a significant role in the development of OCD then the exposure methodology characteristic of ERP therapy may in fact be re-traumatising for the client if done too soon and before physiological protective reactions are addressed.

According to an online interview with Peter Levine (Yalom & Yalom, 2010),

One of the things that Bessel van der Kolk showed when he first started to do trauma research with functional MRIs is that when people are in the trauma state, they actually shut down the frontal parts of their brain and particularly the area on the left cortex called Broca's area, which is responsible for speech. When the person is in the traumatic state, those brain regions are literally shut down, they're taken offline ...The client tries to talk about it. And if they try to talk about it, they become more activated. Their brainstem and limbic system go into a hyperaroused state, which in turns shuts down Broca's area, so they really can't express in words what's going on ... So in a sense, trauma precludes rationality.

Specific associations made between activation and the compulsion are what characterise OCD. Clarification may be gained by understanding a central tenet of how central nervous system activation becomes linked to a sensory cue (Levine, n.d.:B3.19): in 'traumatic coupling' there is activation (the traumatic trigger) which becomes linked to a perceptual cue from any of the five basic senses. This "overcoupling" (over-association) or "undercoupling" (dissociation) is used to try and keep activation levels decreased or controlled. According to Levine, "overcoupling" is an over-association or binding of two or more elements which involve sensations, images, behaviour, affect or meaning (SIBAM) in response to activation. These are in a fixated pattern or sequence. "Undercoupling", according to Levine, is a fragmentation

of elements associated with SIBAM in response to activation. “Undercoupling”, which is preceded by “overcoupling”, is a state with extremely elevated levels of activation and merged energy (Levine, n.d.:B3.20).

3.3.1 SE™ sessions

SE™ sessions involve the introduction of small amounts of traumatic material and the observation of a client’s physiological responses such as shallow breathing or a small change in posture. The therapist guides the client to identify and assess somatic sensations that may be imperceptible to the client’s conscious awareness, such as feelings of heaviness, tightness or dizziness. Practitioners proceed cautiously utilising *titration* (miniscule or slow increases in action of trauma) and *pendulation* (moving between a physiological and internal sense of safety to the sense of autonomic arousal and stress). As Levine (Yalom & Yalom, 2010) expresses it in an online interview:

Over the years I started to develop a systematic approach where the person could gradually access these energies and these body sensations – not all at once, but one little bit at a time. It’s a process that I call titration. I borrowed that term from chemistry. The image that I use is that of mixing an acid and a base together. If you put them together, there can be an explosion. But if you take it one drop at a time, there is a little fizzle and eventually the system neutralizes. Not only does it neutralize but after you do this titration a certain number of times, you get an end result of salt and water. So instead of having these toxic substances, you have the basic building blocks of life; I use this analogy to describe one of the techniques I use in my work with trauma patients. You’re not actually exposing the person to a trauma—you’re restoring the responses that were overwhelmed, which is what led to the trauma in the first place.

A key component to enhancing the client’s ability to self-regulate is the practice of pendulating between the sensations associated with trauma and those that are a source of strength and comfort. The SE™ practitioner will help the client find places of safety, whether that be a place in the body that is not activated by the trauma, or a

physical place to retreat to in one's mind. The client can learn both to establish a "place of safety" so to speak within the body and to recalibrate the neuroreceptors within the entire body in order to respond appropriately to stimuli.

I have found in my private practice, that clients with anxiety, trauma and OCD seem to carry a sense of "dread" around with them without being consciously aware of it. I encourage the client to find a setting or a place where they feel neutral or even positive and to acknowledge that in that place there is no real threat at that moment. At another time, when their anxiety is elevated, they can recall the feeling of neutrality or even safety and use deep breathing and relaxation to assist in releasing some of the anxiety or fear. In other words, as the neurophysiology of the client is often functioning or vibrating at an elevated or reactive level, I encourage them to acknowledge that at a particular moment they are not threatened and can relax their body, breathe and enjoy the present. By showing them how to engage more and more in a calmer way, I aim to stimulate a neurophysiological and neuroreceptive sense of what safe and comfortable feels like. Through treatment, clients are encouraged to develop "resources", which are any forms of assistance that help the ANS to self-regulate. Clients have frequently reported that they have been able to remind themselves or bring to conscious awareness that they are emotionally and physically safe in many settings and to release the fear and anxiety they are unconsciously carrying in their bodies (shoulders, neck, legs etc.) through breathing exercises and returning to the safe sense in a part of their body.

Although there is research exploring the relationship between trauma and OCD, no study was found which bases OCD treatment on this close link. In light of a specific experience with an adolescent where CBT and ERP were only minimally successful in reducing some of the compulsive behaviours and obsessive thoughts, the trauma trigger appeared to remain intact on a sensory or neuroreceptive level. This study will explore the possible benefits of Somatic Experiencing™ therapy in addressing the underlying visceral trauma symptoms for adolescents with OCD.

3.4 A CRITICAL ANALYSIS OF THE CONTRIBUTION OF DR PETER LEVINE AND PROF BESSEL VAN DER KOLK TO THE FIELD OF TRAUMA

Possibly a controversial figure to some because of his interest in unconventional fields such as EMDR, Dr van der Kolk, a former Harvard Medical School professor of psychiatry, was first exposed to the experience of trauma in 1978 when he worked for the (Vietnam) Veterans Administration (VA). Van der Kolk has published extensively on the impact of trauma on development in children and adults. For example, he argues that the current diagnosis criteria of PTSD in DSM 5 are not developmentally sensitive and do not adequately describe the effect of exposure to chronic trauma on the developing child. For example, his extensive research and multiple collaborations show that children who experience multiple forms of trauma often experience developmental delays across a broad spectrum including disruptions of affect regulation, disturbed attachment patterns, rapid behavioural regressions, aggressive behaviour against self and others, failure to achieve developmental competencies, altered schemas of the world, multiple somatic problems, self-hatred, self-blame and chronic feelings of ineffectiveness (Van der Kolk, 2005a & 2005b).

Van der Kolk has openly critiqued the psychiatric community for minimising symptoms of trauma in children and has invested significant effort in building the case for the creation of a diagnostic trauma disorder which is characterised by interpersonal trauma exposure in childhood (Van der Kolk, 2005a). The definition “interpersonal trauma” refers to:

a range of exposure including interpersonal violence, abuse, assault, and neglect experiences, including familial physical, sexual, emotional abuse, and incest; community-, peer- and school-based assault, molestation, and severe bullying; severe physical, medical, and emotional neglect; witnessing domestic violence; as well as serious and pervasive disruptions in caregiving as a consequence of severe caregiver mental illness, substance abuse, criminal involvement, or abrupt separation or traumatic loss” (Van der Kolk, 2014:129).

He advocates strongly for greater emphasis on the diagnosis and treatment of trauma in children and believes that treating more subtle and chronic trauma would assist in minimising the development of disorders such as oppositional defiance disorder (ODD), depression in children and others. In his latest book, *The body keeps the score* (2014), Van der Kolk shares the political process behind including diagnoses in the DSM-5 (APA, 2013) and discusses the denial of his proposed inclusion of developmental trauma disorder (DTD) by the APA.

Responses to Van der Kolk are mixed and range from praise such as, “(h)e’s one of the most generative and creative minds in the trauma field, and his influence has been pervasive” by psychiatrist Judith Herman, trauma expert at Harvard Medical School (Sykes Wylie, 2004:2), to criticisms of his open embrace of alternative therapies such as EMDR and somatic therapies; for example, “(a)dvocating unproven body psychotherapies is professionally irresponsible,” says Edna Foa, professor of psychology in the psychiatry department at the University of Pennsylvania (Sykes Wylie, 2004:9); and “(h)e’s marginalized himself as a scientific thinker ... he’s no longer in the mainstream,” adds Richard Bryant, trauma researcher and psychology professor at the University of New South Wales in Australia (Sykes Wylie, 2004:2).

However, Van der Kolk’s website indicates that he is involved in research on Child Neurofeedback projects which, as of 2019 has raised over 2 million dollars for the second phase of the clinical research project investigating neurofeedback as a non-drug intervention for children with histories of early childhood trauma. Van der Kolk would probably argue that he is simply opening the blinkers of the medical model in order to explore optimal individualised protocols that will support lasting positive changes.

Certainly, my clinical experience attests to the veracity of Van der Kolk’s position. I, and others who work in the South African context, have experience of children and adolescent clients who have experienced ongoing stressors such as lack of schooling, minimal food (albeit not complete starvation which one may then interpret as ‘trauma’ within the DSM 5 definition), lack of a consistent adult presence in their life, lack of heating in winter or exposure to ongoing marital violence. Research cited in this

chapter including Anderson (2016), Lindquist et al. (2012), Lenroot and Giedd (2006), Scaer (2001, 2005), Sieb (2013) and Twardosz and Lutzker (2010) and others supports Van der Kolk's argument that childhood trauma does affect neuronal development and ANS regulation, and creates a greater likelihood or predisposition to mental illness in adolescence and adulthood. While some may argue that Van der Kolk has "marginalized himself as a scientific thinker", this brings to mind the assertion by Gergen (1996:4) that "in spite of its attempt to be value-neutral, the interpretations of the discipline subtly lend themselves to certain kinds of action and discredit others".

Dr Peter Levine has had extensive exposure to therapeutic modalities over the 45-year course of his practice. He holds doctorates in both medical biophysics and psychology and is the author of six books on the subjects of trauma and PTSD (Yalom & Yalom, 2010). Dr Levine was a member of World Psychologists for Social Responsibility, an organisation which responds to large-scale disasters and ethno-political warfare. He also served as a stress consultant for NASA in developing the astronaut training program. In 2010, he received the United States Association for Body Psychotherapy (USABP) Lifetime Achievement Award, honouring his distinguished contribution to the field of body psychotherapy (Yalom & Yalom, 2010). He has been a powerful advocate for the role of regulation of the autonomic nervous system in years of trauma work. His ground-breaking work has essentially argued that trauma is not caused by the event itself, but rather develops through the failure of the body to adequately process adversity (Levine, 2008 & 2010).

SETM differs from cognitive therapies in that its major interventions involve bottom-up processing by directing the client's attention to internal sensations, both visceral (interoception) and musculo-skeletal (proprioception and kinesthesia), rather than primarily cognitive or emotional experiences (Payne et al., 2015). However, an instructive learning that was acquired during this study and identified by Levit (2018a & 2018b), is that while SETM is valuable for clients experiencing ongoing neuro-physiological hyper-arousal, it is still vital to use a psychotherapeutic process to work towards intersubjective analysis and insight. It is posited here that this is especially vital within a context of ongoing therapy sessions which evolve over months or years where significant psychological re-organisation and integration is the objective.

An instructive example of this is that, while exploring a client's trauma and fears, titration and pendulation support the client in not disappearing into the trauma vortex, thereby assisting in guiding the client to tackle their complex trauma without overwhelm and dissociation. Concurrently, as with Sam, intense and complex feelings of shame and beliefs of inadequacy were traced through the psychotherapeutic processes to his relationship with his father and sibling. Furthermore, SE™ facilitates the generation of new corrective interoceptive experiences that physically contradict those of feeling overwhelmed and helpless. Rather uniquely, Levine's position is that the CRN (the core response network including the subcortical autonomic, limbic, motor and arousal systems) have intrinsic mechanisms for restoring inner regulation and autonomic balance. According to Levine, it is the role of the SE™ therapist to facilitate this process. The primary process utilised in SE™ is that of the SIBAM model which guides the therapist to work with the client to identify the following modalities towards restoration: Sensation (relaxation, tightness, heat), Image (internal: memory, dreams, metaphors; or external: an object in the room), Behaviour (posture, facial expressions, movements), Affect (feelings and emotions) and Meaning (beliefs, thoughts, analysis).

However, it is presented here as a fundamental inadequacy of SE™ that there is insufficient guidance with regards to the interweaving of the psychotherapeutic process and the intersubjective neurophysiology of SE™. As a result, inconsistent or idiosyncratic practices do unfold during the sensitive 'dance' between the two methods. Levit (2018a) presents a case which describes the way in which he utilises SE™ to stabilise and contain the client from dissociation while supporting her to access the pain of suppressed sexual abuse in psychoanalysis. In this thesis, Sam is guided in various ways to access his dysregulation and pain which propelled him towards intense feelings of anger and shame, while, gradually integrating a sense of solidity and presence.

However, multiple areas of weakness can and do arise in this complex dance between psychotherapy and SE™. Levit (2018a) identifies challenges with SE™ when regulatory interventions are introduced in response to the therapists' concerns around the client's lack of containment or heightened dysregulation. As he identifies,

“Regulation can derail exploration, rather than facilitating it.” (27). In fact, it was my experience that SE™ training creates an intense concern for the practitioner with regards to the client’s dissociation so that a client is frequently brought back to the present context out of concern with disappearing down the trauma vortex. As a result, instead of SE™ teaching ways to discern the difference between the client experiencing an intense emotion as different from uncontrolled dysregulation and dissociation, it rather moves the practitioner away from the issue by pulling or grounding the client into the present. This was a significant challenge for myself during therapy with Sam as he was wont to get carried away quite easily by internal sensations and profound internal experiences linked to these.

In line with this, Dr Raja Selvam, a senior trainer in Levine’s SE™ training program and the creator of his own Integral Somatic Psychology model, expresses that a weakness of SE™ is its concern not to activate the client too much and instead to down-regulate the intense physiological reactions linked to the fight, flight and freeze responses. Selvam argues that this approach is very useful for trauma debriefing or dealing with a single incident of trauma where down regulation of the ANS, discharge and resourcing are key.

While Selvam (2003–2004) reinforces the contributions of the core practices of SE™ (tracking physiological activation, identifying emotions and meaning, clarifying defence systems as well as overcoupling and undercoupling of physiology and defence mechanisms, resourcing and discharge when appropriate), he emphasises that SE™ underemphasises the need for the client to be able to tolerate fear-inducing or dysregulating emotions that they could not tolerate before. He posits that the client actually needs to develop an increased capacity to tolerate dysregulating emotions and aspects of traumatic experience in order to promote greater resilience in the long run. He presents that:

excessive and frequent regulation of the body can destroy complex experiences of memory, cognition, emotion, and behavior as they emerge, diminish forces of self-regulation, thwart global and stable reorganization, and the building of capacity of psychological aspects of trauma, especially emotions, things that

are not only important for healing symptoms in the short term but also for building resilience for the long term so that a person is less likely to be affected by future traumas or more likely to heal from them quickly. (<https://www.integralsomaticpsychology.com/improving-outcomes-in-somatic-experiencing/>).

In the advanced SE™ training I attended, which was led by Selvam, a more balanced approach was mediated and practiced throughout the training (12 days in total with private and group supervision sessions on top of this for integration). According to Selvan (2003-2004), “Psychologically, it is the ability to experience and tolerate an emotion that allows it to heal.” However, this is an approach that is somewhat at odds with the initial training of SE™ as experienced by myself.

Another area of concern which Levit (2018a) identifies is that SE™ does not acknowledge the role of transference and how it effects the healing process. Levit states, “The forms of responsiveness from SE™ may bias toward positive or idealizing transferences and make it more difficult for negative transferences to emerge.” (27). In Sam’s case it was identified at times that the I, as the therapist, bore the brunt of Sam’s negative transference (especially when he was angry about his father or was feeling victimised even in relation to his brother) and, in retrospect, it was something which I should have, but did not, pursue. It may be that when using his body to sense his anger, Sam was in fact, experiencing authentic or displaced anger against me but this was not pursued in the therapy sessions. It is crucial for a therapist to spend time helping the client find their hidden and authentic voice in relation to the therapist as well as to the central figures discussed during therapy. This is especially pertinent in relation to an “enactment of an infantilizing or authoritarian figure” Levit, 2018:27).

3.5 A CRITICAL ASSESSMENT OF TREATMENT APPROACHES FOR TRAUMA-BASED OCD AND THE REASON FOR THIS STUDY

The impetus for this study was based on the insight of the role of trauma in the development and intensification of obsessive-compulsive behaviours in specific cases. I experienced a specific case of an adolescent who presented with OCD,

experienced complex relational trauma as a child and became extremely scared when she saw things that reminded her of her childhood. After two years in CBT and ERP therapy, although some of the washing compulsions had been decreased, she still experienced debilitating fear, anxiety and “paralysis” or shutdown. Eventually she was unable to attend school because of this.

While it is frequently presented that CBT and ERP are the treatments of choice for OCD (Cottraux et al., 2001; O’Neill & Feusner, 2015), for this adolescent, exposure to the feared objects simply reinforced her intense feeling that she wasn’t “safe” (sic). Through observations and discussions with this teen, it became apparent that her nervous system was in hyper-arousal when she was close to what she viewed as the contaminated objects (these reminded her of developmental traumas including parental fighting, family breakdown and intense anger from both parents). She still experienced physiological responses such as sweaty palms, shallow breathing, increased heart rate and agitated leg movements when she saw an object or heard her parents fighting.

I became aware of Somatic Experiencing™ as a treatment approach for trauma and was interested in the possibility that this approach could address the complex trauma which was apparent in the neurophysiology of the client, a feeling of psychological danger or lack of safety. It became more and more apparent to me that the sense of trauma literally present in the neurophysiology of the adolescent needed to be addressed so that she could experience a sense of safety in her body if there was to be a chance of creating psychological and emotional calm and a sense of being able to manage the triggers which surrounded the teen.

Specialising in this methodology exposed me to the complex role of neurophysiology – the relationship between the young brain (the role of the amygdala in fear responses), the dysregulation of the central nervous system and the ongoing chemical effects on the entire tonal and muscular system, the fascia, organs and emotional regulation of the human being.

There is no doubt that a number of therapeutic approaches are indicated for the treatment of complex trauma with heightened anxiety, fear and OCD. The relationship between the therapist and client is absolutely central as the therapist becomes a significant 'regulator' for the client. It is critical that the therapist is herself regulated and able to grasp the subtle shifts between neuropsychological dysregulation/regulation and physiological shifts. To this extent, personal therapy is valuable in developing the therapist's own attunement. However, it is presented here (in line with Levit, 2018a & 2018b), that some form of psychotherapy or analysis and conceptualisation – whether it be psychoanalysis, Gestalt therapy or Rogerian therapy – is necessary in order to unravel the relationships, perceptions and interpretations which effect the client's beliefs, choice-making and functioning in the present.

Cognitive therapies are important as the dysregulated client is often responding to an older or historical sense of fear which may no longer pertain to their current life. They are, therefore, stuck with cognition and beliefs which pertain to a (now) non-existent past. Assisting the client to remain in the present context which may be calm, instead of being enveloped by a flood of fear hormones, requires significant and reinforced cognitions. However, it is felt that these only become really useful to the client once they begin to intuit and "hold" a sense of safety in their neurophysiology. The argument presented in this thesis is that, if the survival charge is too dominant then the "rational" mind is too aroused and overpowered.

Furthermore, insight into cultural, familial and social contexts is important. Assisting the client to determine the extent that religious beliefs further develop feelings of guilt and shame is important (which may have more to do with how the client interprets the religion than the religious beliefs themselves); understanding the complex and unique family system that the client exists in (especially as an adolescent who is almost an adult but still living at home); understanding the details of the teenage brain which is struggling with impulse control and intense physiological urges ... all of these complicated and real factors become necessary in assisting the adolescent client to deal with trauma-based OCD.

3.6 CONCLUSION

The focus of this study is on children and adolescents with OCD where complex relational stressors or trauma has been experienced and is thought to be linked to the development of anxiety if not directly to the expression of OCD. Van der Kolk (2005, 2014), Solomon and Siegel (2003) and others (Speckens et al., 2007) argue for a somewhat different understanding of the concept of trauma which moves away from the obvious categories of witnessing extreme stressors such as death and violence and argue for an appreciation of developmental trauma which may be more subtle or even more chronic such as attachment trauma, ongoing neglect or bullying. Levine's (2008, 2010) work forms the central concept of this thesis in that the defence reactions of fight, flight and freeze are primary to mammalian safety, self-protection and existence. The argument that the inability to implement and complete aspects of these by a person can result in extreme anxiety is taken as a possible reason for both the anxiety experienced by many people with OCD as well as the perseverative or compulsive actions which may be an attempt to complete the defensive actions. Furthermore, given the natural self-referencing tendency of the child described by Piaget (1950) and Erikson (1997) – that is a sense that they are both the cause of many things around them and that their reality is the only reality they can understand, (Sieb, 2013) – it may be that a heightened sense of responsibility and self-blame is part of the extremity of the excessive thought and attempts at corrective action which characterises OCD (Briggs & Price, 2009).

Although mainstream treatment approaches to OCD are those of CBT and ERP, some cases of OCD do not respond favourably to treatment for a variety of reasons (Albert et al., 2013; Rachman, 1997; Stewart, 2010). The question posed in this study is whether the treatment methodology of Somatic Experiencing™ – which is used specifically to treat trauma in the neurophysiology of the client – may be beneficial to clients with OCD. If, as argued above, the neurophysiological arousal underpinning the obsessions and compulsions is linked to an incomplete defensive action (fight, flight or freeze), then it may be plausible that resolving that experience as well as enabling the creation of new interoceptive experiences that physically reverse those

of overwhelmingness and vulnerability may assist in calming the central nervous system (Payne et al., 2015).

Research pertaining to the use of such a methodology in relation to OCD has not been found in a broad search through numerous periodicals and journals, books and a broad-based internet search. The goal of this study is to assist the client with OCD to release the traumatic energy by restoring the responses that were overwhelmed and led to the trauma in the first place using the treatment methodology of SE™. It should be noted that it is asserted that there may still a place for CBT and ERP in the overall treatment approach once a sense of safety on a neurophysiological level has been established.



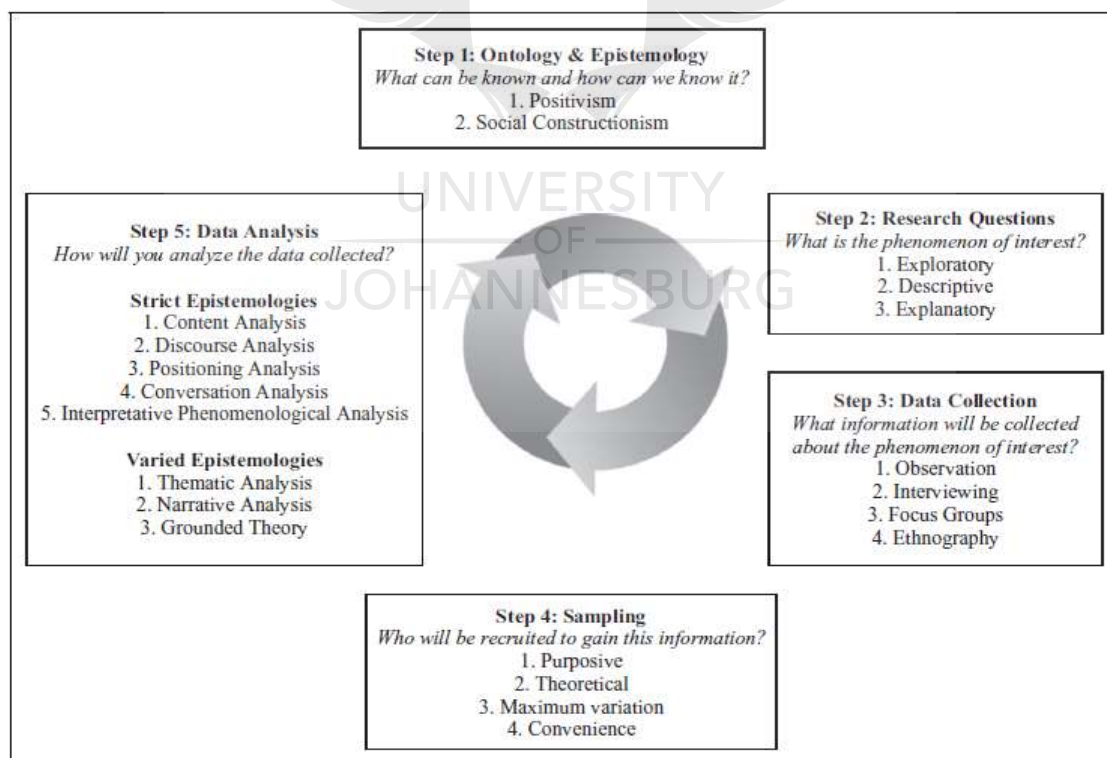
CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

This chapter covers the research design and methodology of this study based on the process recommended by Schwab and Syed (2015), below. The research paradigm and research design and data analysis methods will be explained in order to detail the integrity behind this study. My position and the study's methodology will then be shown to form a natural progression from this foundation. Ethical considerations and measures to address trustworthiness and validity are also explored.

The structure below provides a helpful process for guiding the research process; however, the authors point out that it should be viewed as a reflexive (multi-directional and interactional) process between stages rather than purely sequential processes.



**Figure 4.1: A step-by-step plan for how to conduct qualitative inquiry
(Schwab & Syed, 2015:396)**

4.2 EPISTEMOLOGY AND ONTOLOGY

Schwab and Syed (2015) state that epistemology is more specifically concerned with how one can know the nature of existence. Creswell (2013) posits that a researcher's epistemology is literally her theory of knowledge which serves to influence and decide how the phenomena will be studied. Furthermore, one must acknowledge through epistemological reflection that researchers themselves construct their philosophical world.

The ontological position of this study is strongly influenced by the tenets of the bioecological and constructivist theories. To utilise a more applied example to explain the integration of these tenets, it is valuable to examine the experience of trauma by an individual. In line with the bioecological model, the experience of trauma is highly individualised for each person and will be impacted upon by a myriad of distal and proximal factors including genetics, historical family experiences, immediate support structures as well as the individual's developmental stage, personality and intellectual capacities. Bronfenbrenner (2005) refers to these as "systems" which indicates the more complex and interactive nature of them). In line with this, the constructivist approach acknowledges that these bioecological systems are influenced and underpinned by a range of ideological "discourses" and beliefs (frequently, implicit and unexpressed) that underly these systems in the first place.

On the one hand, societal, parental, familial and social discourses are significant environmental factors in determining and influencing valence and meaning for each individual. The person is not simply a passive pawn but an actor who interacts with these various factors and in reacting or creating them, so he or she automatically makes choices which allow for further influence, action and even change. For example, what is experienced as traumatising for one child – of a specific age who has unique attachment experiences and exists in a specific society with its range of discourses for understanding this type of trauma – may or may not necessarily be traumatising for another child (with different attachment experiences within a distinctive family and social structure and from a different complex of "dominant reality" of discourse).

Therefore, it is appropriate that this study uses qualitative methods in the form of a retrospective phenomenological case study. More specifically, data was collected via therapeutic sessions that were conducted with the adolescent. An initial session with the parent was utilised to ensure that the parent understood the type of therapy being undertaken as well as to consent to the therapy and the filming of the sessions. Therapy sessions were conducted as per the conventional pattern of psychotherapeutic sessions i.e. the client is initially engaged through his or her sharing and discussion of the presenting problem and the therapist's discussion of the therapeutic methodologies that will be used in the session. Through ongoing clarification and exploration during sessions, the process and goals are jointly refined. The pace and number of sessions is based on the needs of each individual client.

4.3 RESEARCH PARADIGM

A paradigm can be defined as a “set of interrelated assumptions about the social world which provides a philosophical and conceptual framework for the organised study of that world” (Filstead, 1979:34, cited in Ponterotto, 2005). These assumptions then guide the researcher in her choice of tools, participants and methods and in how she interprets the data which arises from the study (Denzin & Lincoln, 2000).

The research paradigm of this study is based on the interpretivist theory which posits that reality is constructed in the mind of the individual. A central undertaking of the interpretivist paradigm is to understand the subjective world of human experience (Guba & Lincoln, 1989). This is congruent with the psychotherapeutic person-centred approach which is a foundational framework to the therapeutic approach utilised in the sessions which become the case studies for this research. According to Carl Rogers (1986), the father of the person-centred approach, individual personal experience is the basis and standard for knowing “reality”. Rogers maintained that we behave as we do because of the unique way each individual perceives their situation. In line with both psychotherapy and the research paradigm used in this study, the goal is to create an emotional, relational and physical space for an individual to uncover their understanding of their reality.

Therefore, both the interpretivist research paradigm and the person-centred therapeutic approach aim to “get into the head of the subjects being studied” so to speak, to comprehend and interpret what the subject is thinking or the meaning they are making of the context. Furthermore, a central principle of the interpretivist paradigm is that reality is “socially constructed” (Gergen & Gergen, 2008; Gergen, 2010). Constructivism espouses that through the interaction between the researcher and the participant meaning is discovered (Creswell, 2013; Denzin & Lincoln, 2013). Given the subjectivist epistemology inherent in this approach, it posits that the researcher herself interprets the data through her own thinking, cultural context and thinking informed by her interactions with participants. I constructed knowledge as a result of my subjective experiences within the settings investigated. This underscores the value of both self-reflection on my part and the need for supervision in order to attempt to clarify the role of subjective interpretation and bias.

According to Gergen (2010), any situation has multiple realities, and those realities can be explored and meaning made of them or reconstructed through human interactions. In assuming a naturalist methodology, I utilised data gathered through interviews, discourses and reflective sessions.

4.4 RESEARCH APPROACH

This study is firmly placed within the qualitative approach and utilises the phenomenological perspective which is concerned with focusing on the way things appear to individuals in their experience (Groenewald, 2004). A phenomenological approach entails a systematic description of the subject in such a way that the holistic meaning and contextual relevance is preserved and described as much as possible. According to Terre Blanche, Durrheim and Painter, (2006:463), phenomenological research urges a “return to ‘the phenomena themselves’ as they are revealed in consciousness and lived experience, rather than to impose previously derived theories in the search to understand human behaviour”. Through this, the “lived experience” of the individual can be understood.

While the positivist approach is concerned with identifying data which supports or refutes a hypothesis, a phenomenological approach understands that a plausible interpretation of data is only one possible construction of an interpretable reality, but not the only credible interpretation of that reality. Rennie (1994:6) states that “The constructionism of qualitative research means that the product of its activity is not truth in the foundationalist sense, but instead is understanding. Furthermore, it is not the understanding, but rather an understanding – one that is contextualised in the interaction between the thing investigated and the frame of mind of the researcher.” Phenomenology is highly apposite to researching human experience and, as a research method, it is a rigorous, reflective and systematic investigation of phenomena (Terre Blanche et al., 2006:8). Particularly pertinent to this study is the focus on research as action (Terre Blanche et al. 2006:10) as it is essentially founded on the evidence-based practice position which posits that there is value in psychological research in identifying how the individual perceives and experiences something (e.g. a treatment methodology).

Phenomenological case study research allows for rich and thick description of the phenomenon being studied rather than espousing predictive aspirations. Based on the theoretical linkages deduced between neurophysiology, trauma, obsessions and compulsions, and OCD, the study aims to draw out some insights around treatment from the data which may elucidate praxis going forward.

4.5 DESIGNING THE CASE STUDY

It is generally viewed that the most appropriate research design for this study would be a qualitative phenomenological case study (Okeke & van Wyk, 2015). Yin (2014:13–14) says it offers a more detailed definition of the approach: “A case study is an empirical inquiry which investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.” He continues to explain that the case study inquiry:

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result

- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 2014:13–14).

This study requires an in-depth account and exploration of the bounded system (Okeke & van Wyk, 2015; Merriam & Tisdall, 2016), that is, of the adolescent who has experienced preceding stress or trauma and has subsequently developed OCD. The case study is an instructive method given that its purpose is to provide a critical analysis of practice and is appropriate when the boundaries between phenomenon (OCD in adolescence) and context (role of trauma, options of treatment approaches) may not be clear (Corcoran, Walker & Wals, 2004). Yin (2014:15) elucidates that a case study is empirical research of a phenomenon in a real-life context whereas an experiment isolates the former from the latter as much as possible and controls for the influence of only a limited number of variables (Yin, 2014:16). This is further emphasised by Terre Blanche et al. (2006:287) who posit that interpretive research should not disturb the context under exploration unduly and should, as much as possible, attempt to become a natural part of the context in which the phenomenon occurs.

The case study is able to include multiple sources of evidence which allow for triangulation of evidence (Yin, 2014:16). This will be necessary in the case of OCD where aetiology is complex and involves multiple factors such as genetic predispositions, neurotransmitter functioning, temperament, the experience of trauma, parenting styles and other factors (Barrett et al., 2002; Benedetti et al., 2014; Borges, et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999, 2001; Gershuny et al., 2003; Lin et al., 2007; Lochner et al., 2002; Rachman, 1997). Finally, and of central importance for this study, the preceding development of theoretical propositions guides data collection and analysis (Yin, 2014:16).

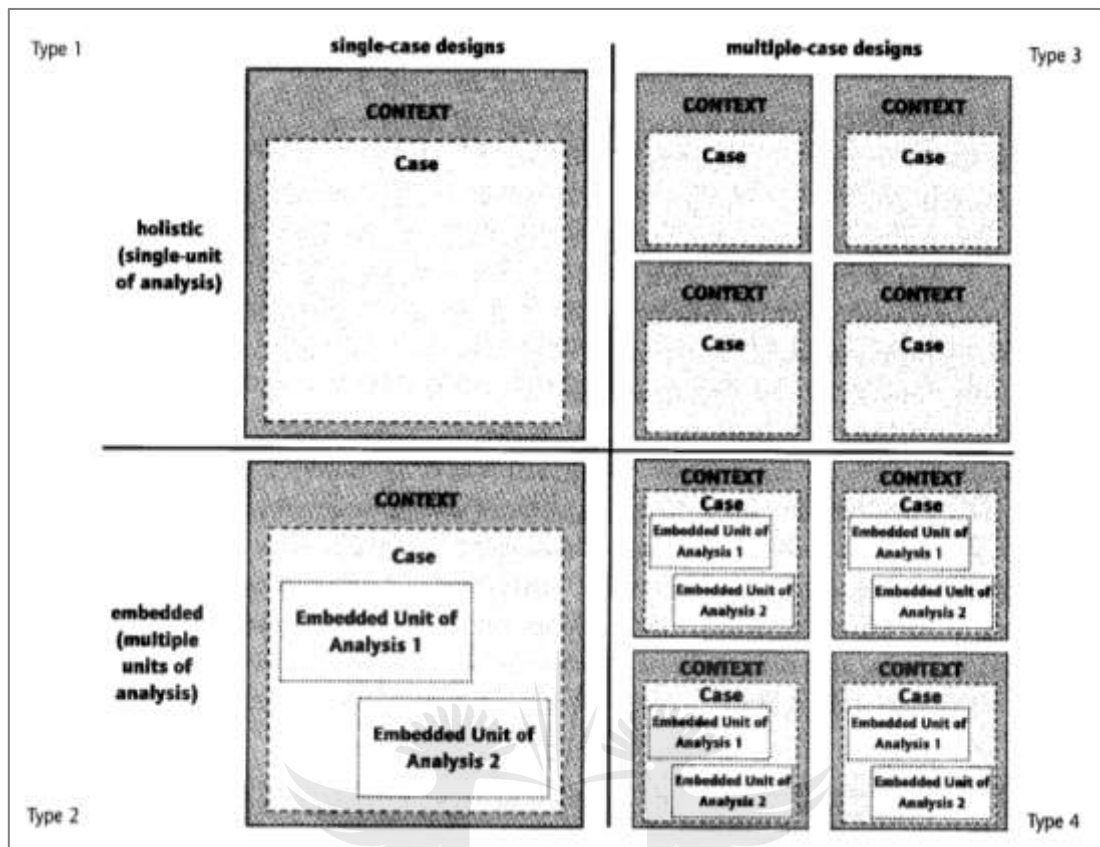


Diagram 4.1: Basic types of designs for case studies (Yin, 2014:50)

According to Yin's identification of basic types of case study designs (2014), case studies should always include an analysis of contextual conditions in relation to the case or subject. Over and above this, case study typologies are constituted according to a number of criteria (Baxter & Jack, 2008). In the exploratory case study, which is viewed as applicable to this study, the focus is usually a single case or a limited number of cases. The purpose is to better understand an emerging phenomenon. Therefore, a phenomenological case study is viewed as most valuable for this study (Okeke & van Wyk, 2015). In this study, a number of factors need to be explored in order to identify the manner in which OCD developed in relation to the experiences and behaviour of the specific client within an environmental context. The treatment methodology will need to be implemented and evaluated for its value.

4.5.1 Sampling

Nonprobability or purposive sampling is viewed as appropriate for this study as the goal is to explore and discover an in-depth understanding of specific cases which fit definite criteria (Creswell, 2013; Merriam & Tisdall, 2016). That is, it will be necessary to utilise the “unique” sample type given the distinctive profile of adolescents or young adults with OCD where trauma precedes the onset of OCD. This is in line with the IPA approach (Smith, Flowers & Larkin, 2009). With regards to sample size, given the vast amount of variability in cases with regards to preceding traumatic or stressful life events (TLEs and SLEs), dimensions of anxiety or other psychiatric disorders, it is argued that Lincoln and Guba’s (1985) point of saturation or redundancy is not relevant to this study. Furthermore, according to Flowers et al. (2009), the aim of an IPA study is to examine elements of convergence and divergence in a reasonably homogenous sample; a small sample is considered valid for this purpose.

4.5.1.1 Identifying appropriate clients for the study

In order to begin the process of identifying potential appropriate clients for this study, a letter detailing the study was sent out to psychology colleagues, many of whom work with adolescents as counsellors or as psychologists at schools. Potential participants were identified by a school psychologist and the clients were discussed with the research psychologist (no names were shared to protect the privacy of the adolescent). After agreeing that an adolescent appeared to be appropriate, the researcher asked the school psychologist to share the introductory letter for this study with the parent of the adolescent either face-to-face or telephonically (refer to Appendix 1). The parent was asked to ascertain the potential interest of their child in meeting with the researcher. The parent was then advised to contact the researcher in order to meet and find out more about the study. The parent was interviewed without her child initially to expose her to more information about the study. The parent was then asked to share the information with their adolescent child and, if the child wanted to enter therapy and participate in the study, the parent was asked to set up an appointment for their child. All study procedures were approved by the Research

Ethics Committee of the University of Johannesburg Department of Psychology (see Appendix 4).

4.5.1.2 Exclusion and inclusion criteria of clients

Participants who qualified for this study needed to meet the following criteria:

- The participants were required to have a history of symptoms of heightened anxiety and/or depression. These needed to have predated the onset of the OCD.
- The participants were required to be suffering from intrusive thoughts reflective of obsessive-compulsive symptoms or obsessive-compulsive disorder (OCD).
- Participants were required to meet the age criteria of adolescence (between 10 and 19 years old). The age range of the sample was motivated by the present study's aim to assess the value of SE™ in adolescents with elevated anxiety and/or OCD.
- All participants were required to be English speaking.

4.5.1.3 Ethical challenges of working with the target group

There are a number of ethical challenges to address in this specific study. Keogh and Daly (2009) discuss the inherent risk of working with subjects with mental and emotional health problems and caution about the need to tread extremely carefully due to the inherent lability of this group. Further ethical challenges relate to the inclusion of minors and the inherent vulnerability of this cohort. Ethical complexities related to confidentiality and third party interests (i.e. parents) are relevant. An ongoing ethical challenge associated with the qualitative paradigm relates to the integrity of the work undertaken and the interpretation of the information. Another issue relates to the confidentiality of the information gathered and disseminated as these have longevity as “hard” data. These issues will be explored below.

4.5.1.4 Therapy sessions

The client participated in SE™ sessions, with the number of sessions being dependent on the client's own process, feedback and needs. These sessions were carefully

documented via video recording. All sessions were transcribed and the client had complete access to all sessions as well as the final chapter on Findings. Data collection was based on observation of video recordings of therapeutic sessions. Therapy sessions were conducted as unstructured observation (except when checklists are used to establish diagnosis) (Silverman, 1994; Lynch, 1996). The paradigmatic lens was both from the person-centred approach (which values the messages and meanings expressed by the client) and the neurophysiological approach (which attributes states of regulation and dysregulation to physiological behaviours).

As Yin (2014) emphasises, “how” and “why” questions are most appropriate to case research. Questions needed to explore aspects such as how trauma was first experienced by the client (such as earliest age of experience of trauma, precipitating events such as divorce, support structures, etc.), the gradual signs of emergence of OCD (very often there are subtle precursors such as relatively mild concern with cleanliness such as handwashing, which then burgeons eventually into full-blown OCD) and, ultimately, the elements and themes which became identified as relevant from those experiences.

4.6 RESEARCH PHASES

The research process for this study consisted of three main phases. The first phase was the formulation of the conceptual intention behind the study. Through extensive exploratory reading initiated by a therapeutic question, the idea for the study became increasingly delineated and the objectives and purpose of the study were eventually defined. A more thorough literature review was undertaken while writing up Chapter 2 in order to grapple in depth with the data and content of the study. Research design and planning of the study constituted the second phase of the study. I developed the semi-structured interview forms and, through purposive sampling, gathered the participants who met the eligibility criteria. Empirical research was the third phase of the study and involved data collection with the participants, their relevant family members and clinical support figures (such as psychiatrists). After semi-structured interviews were conducted, therapy sessions with participants took place; these were

transcribed and analysed for themes and insights. Supervision was undertaken throughout to examine both therapeutic methodology and ethical challenges as well as to verify or question themes and findings deduced from the data. Participant observer journaling was undertaken throughout this stage.

4.6.1 Process of research

The basic process steps recommended by Johnson and Christensen (2012:414) have been used as a structure for this study. They include:

Determining the research questions: Focused questions are clearly at the heart of actionable qualitative research. In the case of this study, the questions posed are:

- a. How does Somatic Experiencing™ assist in alleviating or resolving the experience and effects of trauma as experienced by the child or adolescent?
- b. What are the recommendations for therapists who have clients who present with OCD?

Undertaking the literature review: As outlined in Chapter 2, a range of apposite academic, scientific and empirical issues and constructs were identified and researched in order to investigate the validity of the research questions and the viability of the research study.

Designing the study: With the research questions defined, the “who”, “when” and “how” of the study become important.

- a. Who: Contact will be made with psychologists, medical professionals (e.g. psychiatrists) and relevant organisations (e.g. SADAG) and the study will be explained. Requests for the practitioners to share this information with clients will be made. Clients who show an interest in the study will be referred to me. Meetings to explain the study fully will be organised. All guidelines to ensure ethical measures will be followed (such as meetings with parents, signing of consent forms, follow up meetings etc.).
- b. When: Once clients have agreed to participate, weekly sessions will be established for as long as the client sees the sessions as helpful.
- c. How: Interviews and sessions will take place face-to-face in my office. The sessions will be recorded or filmed.

Collecting data: Data collection will be based on therapy implemented with the client. The basic philosophy of SE™ is that healing depends on internal responses to fear, the development of internal resources and the ability to self regulate. Therefore, therapy sessions will aim to increase insight and awareness around the trauma stimuli, develop awareness of what internal resources are and how to utilise them and attune the client to self regulation and discharge of physiological symptoms of fear.

Sessions outlines are presented here as approximates as it is critical to progress according to the client's level of awareness and ability to manage their trauma and emotions:

- a. Sessions 1–5 (approximately): Work with client to explore and identify significant life events: traumatic life events (TLEs) and stressful life events (SLE); plot the timeline of events with the client assessing the significance of events and identifying arising emotions and behaviours. Begin to introduce concepts which form the core of therapy.
- b. Sessions 6–10 (approximately): Elucidate patterns and deduce themes; start to acclimatise client to becoming aware of reactions to experiences using everyday events and stressors; identifying comfortable and uncomfortable places in the body as linked with experiences and the ability to manage them (using pendulation and titration); support the client to identify triggers and to manage them with body-based awareness and insight into choices (at the pace that the client can manage).
- c. Sessions 11–20 (approximately): Assist client to further sensitise to triggers, signs and behaviours in order to manage the reactions and physiological impulses to stressors; move towards a deeper understanding of how behaviours became linked to anxiety or fears; increase self-management of daily stressors and triggers.

Analysing data: As it will be extremely time-consuming to transcribe the entirety of the recordings, specific sections will be identified and transcribed. Content analysis will take place through coding utilising Interpretative Phenomenological Analysis (IPA) as above.

Generating findings: This step involves synthesising the copious number of notes, videos/recordings and other relevant documents. These will be integrated with the data analysis as detailed in IPA (section 4,7, *Content analysis through coding*).

Validating findings: In order to validate findings, triangulation using multiple methods will take place. These include: supervision, validation of themes and findings with participants/clients, transcribing of recordings and detailed specifications of the process arriving at thematic conclusions and own reflective notes to inform the study in terms of my biases and processes.

Reporting findings: The entire research and analytical process will be written up with all versions being carefully referenced so that a thorough audit trail is maintained.

4.6.2 Ethics and bias in case studies

I am viewed as the primary tool of investigation in this study. Within the interpretivist approach, which underpins the methodological and therapeutic approach of this study. It is understood that my influence pervades the research study: from the layers of language, concepts and worldviews to the identification of the research question, the methodological paradigm, and the analysis of data; the entire endeavour is a reflection of my worldview (Schwandt, 1994). Most critically, the interpretive paradigm is based on observation and interpretation. Interpretation is the process of deducing meaning by drawing inferences or by judging the match between the information and some pattern. However, in the therapeutic relationship (most notably in the person-centred approach) interpretation is posited to be created in the relationship between the therapist and the client; the basis of a strong and positive therapeutic relationship is the ability of the client to find veracity in what is explored and discussed. As posited by Gergen (1985) and Gergen and Gergen (2008), understanding of the world takes place within shared collective systems shaped by the conventions of language, social processes and agreed-upon realities. The value of treatment is ultimately based on the world of understanding constructed by the therapist and client, and the subjective interpretation of the client.

The basis of therapy and this phenomenological study is felt to lie in the quality of the relationship between myself and the client. Furthermore, I aimed to guide the client to

relate to his own history and physiological response to trauma and around traumatic triggers. Both of these relationships cannot be prescribed and are largely dependent on the unique perceptions of the client, the therapist's ability to assist the client's awareness and to move towards resolution and healing. Still, it is necessary to clarify my assumptions and viewpoints as much as possible so as to approximate an understanding of implicit bias. Discursive reflection with self and colleagues also becomes crucial in identifying implicit intent and bias as much as possible.

As Schwandt (1994:228) posits, interpretive research supports a normative sense of method. Citing Madison (1988), he explains that the researcher seeks to make a responsible decision and to give good reasons for her actions. Furthermore, this includes clarifying the judgements involved. Finally, "The interpretation or decision one makes cannot properly be said to be verifiable or testable ... at best, we can appraise the interpretation by applying norms or criteria that are compatible with the very condition that demands we interpret in the first place." He espouses the use of criteria such as "thoroughness, coherence, comprehensiveness and so on" (Schwandt, 1994:228).

Moving towards the clarification of my assumptions and bias, I was driven by a keen interest to explore refractory OCD in adolescence. This interest resulted from contact with an adolescent who had a severe aversion to a school environment and teacher which she experienced as frightening; any possible association between this teacher/school created a sense of "contamination" in the adolescent. She became consumed with protecting herself from this contamination. She spent years in therapy including CBT and ERP but was unable to release the underlying sense of fear or lack of safety that pervaded her reality when she thought of that teacher or was exposed to an object from that time in her life. CBT and ERP therapy were successful in limiting the amount of washing that this adolescent undertook, however, the feeling of intense fear was still prevalent. I became interested in the sense of trauma and fear which appeared to be prevalent and was not affected by CBT and ERP therapy. Ongoing exploration of the adolescent's fear relating to her obsessions and compulsions uncovered early relational attachment trauma with her mother and father. The depth of her fearful reaction was analysed as being primal – there was a history of significant

anxiety and a gradual intensification of this anxiety until an event at school was encountered. After the experience of the event, the young girl developed full-blown OCD.

At this point, I became aware of the idea of “trauma in the body” and started exploring the possibility that this girl’s central nervous system was trapped in hyper-arousal (fear) from her childhood and had then “overcoupled” this arousal with this particular event which was extremely upsetting. It appeared to be a plausible assumption especially once this adolescent reported that she remembered feeling frozen or paralysed when there was fighting between her parents when she was younger. A sense of lack of safety seemed to pervade her sense of being in the world as well as this event at school.

From research and clinical practice, there appears to be a case to be made for identifying preceding anxiety and nervous system arousal. When this is the case, it may be presented that the resulting OCD is a symptom of underlying chronic stress, anxiety or trauma. Based on more than one case, it was hypothesised that if this foundational sense of lack of safety is not addressed, it is possible – maybe even highly probable – that the OCD would not be fully extinguished. The case study is a useful vehicle for exploring individual histories and experiences in detail, for developing rich data and for thoroughly investigating evidence-based practice. Somatic Experiencing™ became a possible therapeutic tool for addressing this underlying sense of fear or lack of safety. Research into the methodology indicated a profound acknowledgment in the theory of neurophysiological stress. A three-year specialisation in this approach informed and strengthened my ability to identify various neurophysiological indicators and to assist the client to release over- and undercoupled factors.

I am strongly influenced by my specific interest in the bioecological model which highlights the significant roles of proximal and distal factors in the development of the child. Every child is simultaneously enmeshed in different systems, from the most intimate parental ecological system moving outward to the larger school system and

the most expansive system which is society and culture. Each of these systems inevitably interacts with and influences one another in every aspect of the child's life.

While there is a clear bias in my approach (as there is with every psychologist's approach), ultimately – within the humanistic or person-centred paradigm – it is the client who must raise the issues and respond directly and indirectly to the value of an approach. It is critical to base the therapeutic relationship on an honesty which allows for the client to give genuine feedback on an approach. This is based on the constructivist paradigm which underpins the person-centred approach – a true appreciation that we are all so idiosyncratically individualistic that tuning in to the client's complex worldview and sense of well-being is the fundamental goal of the psychotherapeutic relationship. The psychologist explores, adjusts and negotiates an approach with the client as an ongoing and reflexive process. The client's own pursuits and change will in turn effect this process. For example, Sam (the client in this study) put more and more effort into meditation, mindfulness and watching exercise videos which in turn positively affected his ability to self-regulate. Given the dynamic nature of life and adolescent development, one is working within a process of ongoing change.

Nevertheless, the assumptions underlying this research were that:

- Chronic anxiety would lead to neurophysiological dysregulation in the client (i.e. hyper- or hypo-arousal on an ongoing basis);
- Chronic anxiety would precede and could lead to the development of obsessions and compulsions;
- If the preceding anxiety and dysregulation could be lessened (through a number of methods), it would, in turn, affect the intransigence of the obsessions and compulsions.

4.7 CONTENT ANALYSIS THROUGH CODING

According to Saldana (2009), coding is an exploratory problem-solving technique that “symbolically assigns a summative, salient, essence-capturing and/or evocative attribute for a portion of ... data” (Saldana, 2009:3). Babbie (2014) posits that coding

is "the process of transforming raw data into a standardized form" (Babbie, 2014:309). Coding is, therefore, a valuable method to use in this case study given the uncharted and exploratory nature of this study.

4.7.1 Interpretive Phenomenological Analysis (IPA) as a methodological framework

Precisely because there are many factors, with varying influences and consequences, a phenomenological study which explores the range of bioecological factors is viewed as useful. An interpretive orientation identifies the qualitative research model as exploring the meaning that people construct from their experiences (Denzin & Lincoln, 2013:6; Merriam & Tisdell, 2016:15). In line with this is the need to gather data to gain increased insight into phenomenon and to examine the value and efficacy of a treatment approach. In light of the effort to achieve design coherence (Terre Blanche et al., 2006), Interpretive Phenomenological Analysis (IPA) is viewed as a suitable methodological framework for the analysis of this case study. IPA utilises an in-depth analysis of single cases and examines individual perspectives of participants in their unique contexts. "The fundamental principle behind the idiographic approach is to explore every single case, before producing any general statements" (Pietkiewicz & Smith, 2014:8). Where applicable, the findings can be used to inform the next case and to allow the researcher to formulate tentative propositions.

As presented in detail in Chapters 1 and 2, while scientific and psychological diagnostic systems aim to create uniformity in diagnosis and treatment in order to increase manageability of symptoms and treatment approaches, this does not fully recognise the complexity of aetiologies (such as in developmental or complex trauma) or individual treatment responses for adolescents living with OCD. The case study, then, becomes a valuable tool to explore the subjective and diverse responses to developmental trauma (Hill, 2015; Van der Kolk, 2014). This necessitates a dynamic explorative process with the researcher facilitating the collaborative process of access to the participant's lived experience and response to the therapeutic process. Simultaneously, the researcher tries to formulate critical questions which allow the analysis to be richer and more comprehensive.

In line with this, there is a compelling evidence-based practice (EBP) momentum which acknowledges the need to explore individual experiences and advocates for the need for such studies to improve treatment outcomes by informing clinical practice with relevant research (APA, 2006). Such practice requires attention to a multitude of relevant factors: “An enormous body of research exists on developmental processes (e.g., attachment; socialisation; cognitive, social-cognitive, gender, moral, and emotional development) that are essential in understanding adult psychopathology and particularly in treating children, adolescents, families, and older adults” (APA, 2006:279).

For this study, the use of idiography (small, purposively selected samples) in the IPA is viewed as a valuable process given that each subject’s lived experience is vastly different and requires an in-depth analysis of the unique characteristics and contexts. Yin (2014) argues that a particular case shows us that something is or exists. Schwab and Syed (2015:396) cite Smith, Flowers and Larkin (2009) as explaining that while IPA takes words and phrases as the initial starting point for analysis, the participants’ words are viewed as “a manifestation of their inner psychological world” and therefore, it is able to allow for the capturing of the underlying experiences of people. They continue to explain that the process of IPA is a type of dual interpretation based on the participants’ interpretation or meaning making of their experience and world and the researchers’ decoding of this meaning and the role of critical questions in light of this latter process.

IPA is an accepted methodological framework for qualitative studies (Pietkiewicz & Smith, 2014). According to Pietkiewicz and Smith (2014), IPA emphasises studying people ideographically in that its goal is to explore and generate detailed descriptions of how individuals experience phenomena. According to Saldana (2009:47), coding methods depend on the nature and goals of the study; most methods are not discrete and may overlap in function.

In this study, an initial broad analysis was conducted around the client, Sam. All factors which he had identified and communicated to the therapist were noted. For example, he shared his particular obsessions and compulsions, he spoke a lot about his father

and specific members of his family indicating the main alliances and contradictions in these; he discussed his feelings in relation to school and his self-concepts and emotions in relation to his peers; he elucidated these perceptions and feelings about himself in relation to his past experiences at school; then, gradually more repressed or conflicted and intense feelings in relation to his father and mother began to surface; negative overpowering emotions such as intense anger and shame during school activities arose as Sam arrived at therapy from school or after an experience with peers over the weekend.

Using Structural (content-based or conceptual phrases representing the topic of enquiry) and In Vivo Coding (keeping coding rooted in the perception and language of the participant) (Saldana, 2009), the researcher used clustering based on emphasis and occurrence: "Qualitative codes are essence-capturing and essential elements of the research story, that, when clustered together according to similarity and regularity (a pattern), they actively facilitate the development of categories and thus analysis of their connections." (Saldana, 2009:8).

The first cycle themes were identified during the initial coding and included examining language, affect and procedure (refer to Appendices 6 and 7). These included:

- Family context: with individual categories relating to feelings towards his father, his father's behaviour, conflicted feelings towards his mother, conflicted feelings towards his siblings;
- School context: with individual categories relating to being a teenager and the self-esteem issues related to this but with a pervasive sense of inadequacy dating back to first grade;
- Peer group context: with theme linking back to a sense of low self-esteem and patterns of cognitive distortions in relations to boys and girls.
- Issues related to body image, dieting and linked to lowered self-esteem;
- Issues linked to anxiety, obsessions and compulsions and a sense of pervasive fear or dread.

Simultaneous Coding was then utilised as a means of identifying multiple emotions running throughout the themes above. For example, in this study Emotions Coding

was applied to the participant's experiences of trauma or distress through the labelling of the emotion recalled. Process Coding was also applied to the anxiety and shame resulting from the themes and the behaviours linked to these. This led to a reanalysis of the initial work and condensing of themes. Dey (1933), cited in Saldana (2009:80) presents that this method can be used to consider the complex interplay of factors and how the process evolves and shifts for the participant which emphasises the dynamic nature of the process. He also encourages researchers to maintain analytic memo writing to increase awareness about personal reactions to the participants or phenomenon, identify emergent patterns and themes, reflect on coding process and code choices, identify possible links to theory and existing concepts etc. Such analytic writing and continued research began to shed a light on deeper issues of shame and guilt which became apparent in Sam's psychology and were further explored in therapy using SE™ (refer to Appendices 7 and 8).

According to Corbin and Strauss (2008), cited in Saldana (2009:11), the ability to systematically elucidate how themes and concepts interrelate with each other leads one towards the development of theory. Saldana clarifies that a theme is an outcome of coding, categorisation and analytic reflection. As recommended by Saldana (2009), in order to improve trustworthiness, these concepts and themes were discussed with Sam in order to explore internal thinking as well as presenting windows of opportunity for clarifying emerging ideas and themes (refer to Appendix 8).

4.8 QUALITY OF RESEARCH DESIGN

According to Yin (2014:19), the criteria for judging the quality of research designs rests on the four tests of construct validity, internal validity, external validity and reliability.

4.8.1 Trustworthiness in case studies

According to Pugh (1998), the case study method is valuable when needing to make sense of the progression or development of transformation in therapy. It allows for the in-depth analysis of the multi-faceted nature of problems that individuals present in therapy and of the nature of change resulting from interaction and communication between client and therapist. According to Stoller (2012), the case study can make specific contributions to research and knowledge: they can answer “how” and “why” questions, they capture the worldview and the subjective experiences of the participants and they can contribute to normative theory. I would argue that another valid contribution is the value that case study research creates for evidence-based practice. The case study methodology allows for individual histories and subjective world views to be explored and to become a rich and detailed source of information for other practitioners and researchers. And, in terms of evidence-based practice, the case study can be used as a mechanism to examine and improve practice with practitioners’ actions and the theories that underpin such actions being studied (McGloin, 2008).

Many theorists cited in McGloin (2008) (Agar 1986, Sandelowski 1995, Eisenhardt 1989 & Yin 1994) have argued for the inappropriateness of using criteria from the quantitative paradigm, such as validity and reliability, to measure outcomes in qualitative research. The purpose of the qualitative study is not to generate generalisable data that can be used in a broader research sample, but to generate hypotheses and theories.

Guba (1981) is one of the main proponents of the need for a different model to be created to ensure the trustworthiness of the case study in the qualitative research paradigm. He proposes four criteria of trustworthiness which are truth value, applicability, consistency and neutrality.

- a. In terms of truth value, Lincoln and Guba (1985) propose that this criterion reflects how confident the researcher is with the veracity and integrity of the study’s findings. The first step to ensuring this is through the participant’s close involvement in interpretations and diagnosis which is reflective of the humanistic

psychotherapeutic model upheld in this study. This will require educating the client and engaging in a process of arriving at an agreed understanding of the criteria, definitions and treatment effects (Thompson 2004). Reflection on the part of the client within a truly egalitarian and respectful therapeutic environment is crucial. This is based on my foundational belief that the client, and not the therapist, understands him- or herself well and is best placed to guide the therapist towards his or her own experience or their “Truth” in each moment.

This aspect supports the issue of “groundedness”, i.e. ensuring that the findings are grounded in the data produced rather than the researcher’s objectives (Strauss & Corbin, 1990). Another way to ensure truth value is the process of supervisory guidance whereby the findings are reviewed by a practitioner familiar with the phenomenon (Thompson, 2004). For this study, video-recording of sessions (with explicit signed participant consent and parent/guardian signed consent) and analysis of coding, categories, themes and links to theory will be supported through an external psychologist/supervisor with an expertise in SE™.

Another important strategy to assess the truth value of the study is that of triangulation (Thompson, 2004; Yin, 2011; Yin, 2014). Through triangulation, multiple sources of data are used, thus enhancing the credibility of the strategy (Yin, 2014). Such sources of data include survey instruments, analysis of related documents, interviews and documentation.

- b. Applicability (Lincoln & Guba, 1985) refers to the degree to which findings can be applied to other contexts or groups. Many theorists argue that focusing on one particular case in a particular setting makes the research findings inherently difficult to apply to a wider population (Yin, 2011). However, Yin (2014) posits that case studies “are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study [...] does not represent a ‘sample’, and in doing a case study, your goal will be to generalize theories (analytical generalization) and not to enumerate frequencies (statistical generalization)”. Yin (2003) believes that focusing on a small sample results in the generation of “deep

data". It is hoped that by focusing on three cases, there will possibly be some level of overarching constructs or themes to inform future studies or cases.

- c. Consistency is the third criterion of trustworthiness and applies to the stability of data (Yin, 2014) if the study were to be replicated. Guba (1981) argues that a great degree of variability is to be expected because of the naturalistic nature of qualitative research. Consequently, Guba (1981) suggests the notion of dependability, with variability being apportioned to specific sources. It is suggested that the dependability of the data is assessed through the use of an audit trail as a thorough record to ensure accurate data collection (Guba, 1981).

Lincoln and Guba (1985:319) cite Halpern's (1983) categories for reporting information when developing an audit trail:

- Raw data – including all raw data, written field notes, unobtrusive measures (documents).
- Data reduction and analysis products – including summaries such as condensed notes, unitised information and quantitative summaries and theoretical notes.
- Data reconstruction and synthesis products – including structure of categories (themes, definitions, and relationships), findings and conclusions and a final report including connections to existing literatures and an integration of concepts, relationships, and interpretations.
- Process notes – including methodological notes (procedures, designs, strategies, rationales), trustworthiness notes (relating to credibility, dependability and confirmability) and audit trail notes.
- Materials relating to intentions and dispositions – including inquiry proposal, personal notes (reflexive notes and motivations) and expectations (predictions and intentions).
- Instrument development information – including pilot forms, preliminary schedules, observation formats.

- d. Neutrality is Guba's (1981) final criterion for the trustworthiness of data. This is the degree to which findings arise directly from the participants in the research, and not from other influences, biases or perspectives (Golafshani, 2003:6). Neutrality is linked with confirmability (Golafshani, 2003). As with truth value, triangulation and reflexivity are used to establish neutrality in qualitative studies (Arber, 2006; Golafshani, 2003; Thompson, 2004). Yin (2003) argues that "the data generated from just a few subjects contains a wealth of deep data often overlooked by other methodologies".

A critical strategy that supports the attempt towards increased neutrality is the concept of reflexivity (Arber, 2006). This is especially necessary in light of the inherent subjectivity of the researcher's worldview. Reflexivity enables the researcher to explicitly identify the potential influence of her bias (Thompson, 2004). It is proposed that there must be systematic and authentic examination of personal and methodological issues which should be further explored in supervision. According to Arber (2006), reflexivity on the part of the researcher is critical to enhance the credibility of a study. Reflexivity is the capacity to reflect upon one's actions and choices during the entire research and data analysis process and to view the positions and beliefs we hold in the same way that we view those of others (Arber, 2006). Jordan (2001) puts it succinctly when he speaks about the "witness self" as a developmental process: "Instead of being had by one's habitual behavioural patterns, emotions, desires and thoughts, a sophisticated level of self-awareness means that there is a locus of witnessing in consciousness that can make the behaviours, emotions, desires and thoughts into objects of attention" (Jordan, 2001: 2). Arber (2006) used a research journal to assist her with meta-awareness so that through careful documenting of her feelings about her role and the process of transformation she gained insight into the tensions between her roles.

4.8.2 Construct validity

Yin (2014:46–47) discusses the challenges of qualitative research and case study design in terms of construct validity and highlights the main challenge as being the

sufficiency of measures to establish validity including multiple sources of evidence, a chain of evidence and the reviewing of the study report. In this study, the diagnosis of OCD will be identified by the use of the DSM-5 criteria and the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS). The experience of trauma and its connection to OCD will either be expressed through the subjective experience of the client and possibly from parent/guardian explanations of histories. The timeline will be important in this regard. It will be very important to explain the study carefully to clients and for them to understand that even if the results do not lead to a complete cessation of OCD, the findings may still be valuable and the effect of the therapy should still be ameliorative. Therefore, both inductive and deductive reasoning have central roles as cognitive methodologies in this study using the defined constructs to shape the goals and assess the ability of SE™ to treat the disorder on the one hand and allowing the evidence to take the findings to where they want to go even if a linear relationship between OCD, trauma and SE™ is not established (Yin, 2011:95).

4.8.3 Internal validity

There are major challenges to internal validity reported by Yin (2014:47) which revolve around the validity of inferences from evidence based on subjective sources of information and which are, by definition, subjective and limited. There is danger of positing a causal relationship between two factors in an explanatory study when events cannot be directly observed. This is relevant to the current study because of the exploratory nature of the study. Yin (2014:136–142) proposes that the best foundation on which to develop case-study analysis is to have a general analytic strategy which may include aspects of pattern matching, explanation building, addressing rival explanations and using logical models in order to strengthen internal validity and result in compelling case-study analyses.

Joseph Maxwell (2009:244–245), cited in Yin (2011) recommends additional strategies for combating threats to validity. These include intensive field involvement, rich data, respondent validation, search for discrepant evidence, triangulation and comparison. According to the current author, the most basic and critical strategy for insuring internal validity in a psychological context is based on the central tenet of the

humanistic or Rogerian approach to therapy which espouses that the client has the answers, and will move towards integration and actualisation of their core values of self.

4.9 CONCLUSION

This chapter has detailed the processes followed in this qualitative study beginning with the ontological and epistemological position with regards to knowing. The study is placed within the phenomenological perspective which is concerned with focusing on the way things appear to individuals in their experience (Groenewald, 2004). The research study's main focus was clarified and methodological processes for data collection were detailed. The case study becomes an important tool with the researcher facilitating the collaborative process of access to the participant's lived experience and therapeutic process. Ethical considerations were carefully explored given the challenges of including minors and people with mental disorders as the main participants of this study. Furthermore, the complexity of my role as therapist and researcher was analysed. I clarified how trustworthiness of data was ensured covering areas of truth value, applicability, consistency and neutrality. Checking of interpretations and meaning-making with the client, supervision, triangulation and the researcher's reflexivity are critical factors in supporting trustworthiness. Finally, the research phases and steps were delineated.

CHAPTER 5

DATA COLLECTION AND ANALYSIS

5.1 INTRODUCTION

This chapter is structured according to Stake's (1995) outline for a case study report (cited in Merriam, 1998). Additional subpoints have been added for further detail where appropriate. Based on this outline, the *entry vignette* will describe the case in order to allow the reader to start developing a clear sense of the particulars relating to client, family and environment. *Issue identification* will explain how the study came to be and what issues the therapist believes assist both in establishing the value of the case and in understanding the case more fully. An *extensive narrative description* to further define the case and context is given to present depth and detail as if the reader were present at the sessions. This is followed by *assertions* where I will summarise what I understand about the case and how my generalisations about the case have changed conceptually or in level of confidence. I close with an experiential note reminding the reader that the report is just one person's encounter with a complex case. Chapter 6 will continue with the *identification and development of key issues* or findings which will assist in understanding the learnings of the case.

5.2 THE CASE OF SAM

5.2.1 Entry vignette

Sam, is a 16-year-old white male who lives at home in an intact family unit with his married parents and two siblings who are at university. He attends a private school in a middle-class neighbourhood. Both parents are employed in skilled jobs or professions. Sam exhibited heightened anxiety, compulsions and depression and his mother requested a meeting with the therapist and his inclusion in this study. According to Sam's mother, there is a possible genetic tendency towards some of these pathologies with indications in maternal and paternal lineage; one of Sam's siblings suffers from anxiety, depression and OCD. Sam's mother describes the home as being supportive and caring. Sam's dad has always been a participating father who

spent time with his children and was involved in aspects of their lives. However, Sam's father has a history of anger and outbursts which were present from when the children were small. Sam's father has been diagnosed with a potentially terminal illness and is currently undergoing treatment for this. According to feedback, these outbursts have been exacerbated by the father's illness as treatment is painful; and it is also probable that the experience of a serious illness is inherently anxiety provoking and destabilising given its severity. There are times of fighting and tension at home. Sam's mother described the home as a loving and caring home. Sam's mother describes herself as a very involved parent. She reported that her children confide in her and they have a close relationship with her.

Sam describes himself as an anxious child who felt that he struggled to fit in at school. With the development of low self-esteem, increasing anxiety linked to school and an extreme sense of social inadequacy, he eventually developed obsessive compulsive symptoms characteristic of OCD. These included fears about repeating things (e.g. saying the same words more than once) and fears about not repeating other actions (e.g. walking through a doorway a certain number of times). Eventually, Sam presented with symptoms of depression, heightened anxiety, OCD and suicidal ideations.

5.2.2 Family context and initial meeting with Sam's mother

Sam's mother attended the initial meeting with the therapist so that the relevant details could be discussed in detail. Sam's father did not attend that session. It was also intimated that the father does not understand the benefits of a therapeutic approach and, therefore, is not interested in being involved in it. From the therapist's side, details relating to the following issues were clarified: the therapeutic process and treatment approaches that would be utilised; the issue of consent and the right to terminate therapy at any time; the filming of the study; how confidentiality would be ensured; the process of supervision to the extent that it impacted on the sessions and confidentiality of the client; the duration options and possible outcomes of the study.

Sam's mother in turn shared her perception of the presenting problem, Sam's school history, his general health, current emotional symptoms, and familial and contextual factors which were relevant to the adolescent's functioning (e.g. interactions with people at home, financial issues, level of anxiety related to school learning, social factors at school, etc.). She explained that she was anxious for her son to "get help with his OCD". She described the household as being extremely preoccupied with her husband's illness. She explained that she was concerned about Sam given the indications of extreme anxiety, lowered self-esteem, depression, obsessions and compulsions.

Sam's mother was concerned about confidentiality and how much detail would be shared in the study. This was discussed with the clinical supervisor for this study and, in a follow-up discussion with Sam's mother, issues were framed to ensure that Sam's mother was assured that while there would be identification and inclusion of familial and historical factors these would remain in broad sweeps as the main focus of this study would be on Sam's daily experience of his OCD and other related issues. Therefore, it would be impossible not to include an exploration of some of the preceding dysregulating factors, however, most significant for this study would be Sam's actual experience of the SE™ methodology and other treatment approaches and the extent to which these assisted him to manage the OCD. After meeting with Sam, he agreed to therapy and signed the consent form.

5.3 ISSUE IDENTIFICATION

5.3.1 Neurophysiological arousal underlying obsessions and compulsions

As discussed in section 2.1, the impetus for this study was the insight that preceding stress or trauma can develop a strong dysregulation in the nervous system of the client presenting with OCD. Working with this neurophysiological arousal in the body as well as the "mind" or thoughts (and not only the "mind" or thoughts as is customary in the mainstream psychotherapeutic approach) may be a valuable additional resource for therapists with similar client symptoms.

I became aware of Somatic Experiencing™ (as discussed in section 2.2.8) as a treatment approach for trauma and observed in a client with OCD that some symptoms closely interacted with trauma activation and behaviours. This initiated the thought that a body-based trauma-related approach may assist in regulating the underlying neurophysiological dysregulation experienced by this adolescent who was presenting with overt signs of obsessions and compulsions. It would be specifically aimed at addressing the complex trauma which was apparent in the client, which displayed itself in a feeling of psychological danger. From there, therapy would enable the client to work with establishing orientations which were in tune with the present reality which was less dysregulated and, in fact, “safe”. Concurrently, psychotherapy could also assist with tracing, understanding and informing the obsessions and compulsions characteristic of OCD, utilising psychotherapy, CBT and ongoing regulation of nervous system arousal. Therefore, the impetus for this study was established.

5.3.1.1 Sam’s neurophysiological arousal

It is relevant to highlight that according to Dr Peter Levine (1997), a stressful event is defined as an event that causes a long-term dysregulation in the autonomic nervous system; it is not in the event but in the individual’s physiological reaction to the event. Furthermore, what is experienced as stressful or even traumatic to one person may or may not be experienced as such by someone else as people differ in how they react to situations due to different genetic makeup, early-life challenges, and specific trauma and attachment histories (Payne, Levine & Crane-Godreau, 2015).

Given the individuality of each case, Sam’s microsystemic network (as discussed in section 2.1.1) introduced distinctive factors into the therapeutic case. Within the therapeutic context issues of shame, guilt and anger began arising as significant dynamics. Over-activation of the nervous system and heightened anxiety was going to be a specific dynamic, with under- and overcoupling linked to obsessions, compulsions, guilt and shame. Therapy also needed to address Sam’s neurophysiological shutdown which expressed itself as depression.

In terms of the current study, Sam entered therapy highly distressed and wanting to discuss what he called “the lifetime of the OCD”; he complained of intrusive thoughts,

compulsive behaviours and heightened anxiety. He was deeply disturbed by these intrusive thoughts and behaviours as they took up a large part of his thinking and interfered with his functioning at home, school and socially. For example, he was terrified of repeating words which entailed monitoring everything he said, he described having to re-walk through doorways in his school without it being noticed by peers, or having to walk on certain tiles only at home and at school. Another significant preoccupation was his sense of being different and intensely inferior to his peers in and out of school and being extremely shy around girls. He also showed symptoms of depression and suicidal ideations. Underlying all of these was a sense of what he later described as “PTSD”, a sense of heightened physiological reactivity and fear.

Although the “overt” presenting issues, according to the client, were the obsessions and compulsions, it became apparent to the therapist that there were multiple complex underlying factors. Some were linked to family dynamics, parenting styles and heightened reactivity in the home (as discussed in section 2.2.1). For example, there were historical and ongoing patterns of criticism and fighting and a tendency towards control and perfectionism in the family. However, there was a closeness between the brothers and family feelings towards each other and Sam would seek out his brother’s advice at times. Sam was especially upset by his father’s inconsistent rages and sensitive to his brother’s criticism which evoked a sense of inadequacy in Sam.

Reports from Sam and his mother (separately) indicate that the relationship between one of the other adult children and their father is one in which, according to the mother, this child will “stand up to (his) father and shout back at him”. Sam agreed that he himself seems to have taken on the role of the peacemaker between his older siblings and their father because of the volatile relationship. Sam was closely aligned to his mother and expressed that he wanted to protect her as he felt she carried the majority of the daily responsibilities of the household and a lot of stress as a result. He expressed that he felt that she worked too hard and did not get support at home.

Levine (2010:89) highlights an interesting “Gordian knot” of anger, fear (of violence or retaliation), repression and shame which appeared to be applicable to this case. Depression, suicidal ideation and exhaustion would frequently infiltrate Sam’s daily experience. He brought these into therapy, however, it also became apparent in

therapy that Sam was extremely angry at his father. The thesis shared with Sam was that his “disallowed” feelings (which he felt ashamed for expressing) may have resulted in a kind of “splitting off” as he viewed himself as the “peacekeeper” in the family system, especially in terms of his support for his mother. In therapy, Sam began to express his agitation related to his role in the family and to discharge his activation when thinking of his father’s outbursts. This was done through using SE™ to identify the sensations in his body, to unearth his emotions and to amplify them at times through slowing down his speech (when he wanted to say something to his father) and the action so that it was deeply felt in the muscles and increasingly discharged without either physiological and emotional collapse or intensification of the anger.

Feelings of fear and anxiety needed to be allowed, identified and then discharged with a view towards greater self-acceptance, self-acknowledgment and forgiveness.

Sam’s posture, muscle tension, breathing, pallor and eye contact would range considerably within and over sessions. He would frequently move between heated pallor and agitated movements, to collapsed postures when sensing his shame and becoming conflicted about his contradictory feelings when thinking of his mother.

It was apparent that Sam had a poor foundational self-esteem when he entered therapy. Sam recalled feeling inadequate next to his “brilliant” sibling who, while helping him at times with school maths, could also be impatient and critical when Sam did not grasp the process. Sam would, at times, come to sessions feeling attacked and fragile. Sam expressed feeling challenged with social issues such as intense shyness amongst females which appeared to date back to grade 1. He experienced an intense sense of inadequacy around teenage girls; and a sense of inferiority to boys from another “competing” popular school. He saw other boys as being better than him.

Although the photographs could not be included in this thesis because of confidentiality, there were noticeable differences between Sam’s overall posture, relaxed poise, openness in his smile and eye contact from the beginning to the end of therapy.

5.4 Factors influencing treatment decisions

It became apparent early on that the psychologist needed to utilise a broad range of therapeutic methodologies given the various factors affecting the adolescent client and the complex ramifications of these (as discussed in section 2.1.1). While SE™ was identified as a treatment methodology for the dysregulation leading to a host of issues, cognitive therapy and insight-oriented therapy were also critical in addressing the complexity of symptoms.

It should be highlighted that a more concentrated or “pure” physiological form of SE™ is used in cases where an identifiable traumatic event has occurred. For example, Dr Levine is known for working with cases of PTSD with soldiers who have been involved in wars, and SE™ is frequently implemented with survivors of traumatic situations such as earthquakes. These are viewed as more bounded cases. In distinction to these, this thesis was interested in evaluating the usefulness of a trauma-based approach for OCD over time where preceding chronic stress, fear or anxiety (such as relational trauma based in the family context) resulted in sympathetic nervous system activation and the development of anxiety, depression and compulsive behaviours over time.

Factors which indicated subtle, chronic relational trauma were relevant in influencing the case of Sam:

- genetic predispositions for the same or similar psychiatric conditions which were reported in close family members;
- ongoing parental dysregulation (outbursts) and the effect of these on the client’s mental health and the mental health of siblings in the home;
- chronic illness of a parent and the effect of this on the practical and emotional functioning of the household including added stress on the mother;
- anger at the father and repression of this due to his assumed role as peacemaker within the family system;
- core beliefs of (excessive) responsibility for the maternal parent, shame, guilt and fear and the relationship of these to self-esteem;

- social dynamics related to adolescence (including rejection from groups);
- ongoing anxiety related to self-esteem, school pressure and a sense of physical inadequacy;
- self-constructs related to a more foundational sense of inadequacy and low self-esteem
- depression as a reaction to low self-esteem, ongoing family fighting and school pressure;
- suicidal ideations by the client and a sibling.

5.5 Extensive narrative description to further define the case

Selected portions of the therapy sessions are presented, interspersed with commentary, in order to display the thinking and development of insight of the therapist into this case. The goal of the following description is to identify the broader movement of treatment approaches used in therapy based on Sam's needs. The therapist's perception of neurophysiological cues informed the movement of therapy.

In line with the bioecological theory there are many systems which affect who we are. Systems impact daily living in dynamic and complex ways: Sam's family system, school system, peer-group system, emotional and biological systems all play a daily role in affecting his ability to regulate. Therefore, as will be evidenced in the excerpts, therapy did not always directly address the dysregulation underlying the OCD but also worked with a range of daily issues, family disruptions, school stressors and ongoing anxiety. Furthermore, therapy sessions must be responsive to what the client brings and also continue the underlying thread of overarching goals.

A defining aspect of therapy, as is reflected in these excerpts, is the constant "backwards and forwards" between finding moments of clarity and sensations of peacefulness in the mind and body, and return to the dysregulating fear and anxiety which typifies disorders such as OCD. Underlying this movement is the reality of life with ongoing stressors and complications which add to the client's dysregulation and challenges. In other words, therapy is very much a process, and certainly not a straight-forward one. However, what we are looking for in therapy is that the severity

or extent of the backwards and forwards movement becomes increasingly less as distress tolerance is increased and a greater sense of inner calm and understanding is achieved by the client. This dynamic is visible in the sessions with Sam.

At the beginning, Sam entered the therapy room quite activated and upset about the role that OCD was playing in disrupting his life. From the first session Sam was anxious to explain the “lifetime of the OCD” and shared that he was preoccupied by his thoughts and his mind: As he explained, “thinking is huge ... in my mind ... have to monitor (it) constantly”. This was accompanied by a highly strung energy. He explained that his intrusive thoughts take the form of his fear of repeating something (for example, if he has watched a video or said something previously, he cannot redo these actions/thoughts). According to Sam, the threat is that if he watches a video again or thinks a thought again, “It will change my luck”. He explained that he is always monitoring his thoughts and has to constantly search his memory to check if he has said something before or thought it before. Having to constantly self-monitor “makes my brain go crazy”. Sam was visibly upset when sharing this and tried to explain the amount of “pure space and time” the obsessions and compulsions take up in his brain.

Sam’s obsessions and compulsions included having to redo some actions (sometimes three times or more) such as walking through a doorway or ensuring that he stepped on alternate floor tiles. He explained that the obsessions and compulsions were distressing and distracting in school both academically and socially. For example, he felt compelled to redo an action when he was in the middle of a lesson, walking through a doorway to a class or completing work. When the fear of a thought or action “changing his luck” was explored, he explained that he believes that if he repeats something it will change his relationship to a person or his future. In other words, it would appear, it will make life unsafe or unpredictable. Therefore, his obsession was to not repeat an action, thought or word so as to keep his life “safe”.

When sharing his insights about his childhood, Sam described himself as “shy, embarrassed, ashamed”. He said that he was chubby when he was a young boy until he reached his teens. He remembers, ever since grade 1, trying to impress his class or a girl. In his own words, “I felt I wasn’t good looking ... I just felt that people were better than me ... everything I wanted to do they would do better”. It was apparent that

feelings of inadequacy and lowered self-esteem were themes from a relatively young age. Sam started trying to impress others at school from around grade 1 and reported that people started looking at him as the “nice guy”. He expressed that he was “that guy that girls would pull a prank on” and that he “liked it” as it was a form of attention. He recalled that he cried a lot in primary school and tended to feel left out. By grade 6, when social cliques started forming more decisively in school, Sam expressed that he felt left out (“I was never the cool guy”) and that he felt inferior to peers and boys from another private school (“I was jealous of the other boys ... wasn’t good enough ... they didn’t care ... now [I] feel like it is normal for me to be the left out one”).

SETM was initiated in the first session with the therapist guiding Sam to perceive his body as a resource for healing. He was guided to find a place in his body which felt comfortable or at least, neutral. It was also apparent from the first session that Sam needed to start finding ways of combating the intrusions. As he already believed that his body was a resource in terms of its ability to become healthy and fit (a journey which Sam had embarked on very seriously for the last few years), it actually was something that Sam immediately seemed to understand the value of. However, this was also complicated by his constant awareness of his physical flaws and his intense self-judgement of inadequacy. There was a strong underlying message of shame and inadequacy in his behaviour and ideas. After some time, within the first session, he was able to identify his “lats” as feeling peaceful. The long-term goal was to develop Sam’s ability to regulate his nervous system using his body in the present when it was, in fact, often calm. His over-reaction, dysregulation, anxiety and fear was most often rooted in the past and a sense of the world being “unsafe”.

It was important to comprehend and grasp the complex role that Sam’s family played in the development of himself, his self-constructs and his psychopathology. On another level, it was necessary to work with Sam’s mother to explain his experiences and emotions and to work towards more constructive communication in the home. His father did not attend the sessions (he was also in treatment at the time with a serious illness). In Sam’s case, he was guided to interact with his father in some sessions by imagining his father’s presence and accessing his physiological and emotional responses to his father and working through them in the session.

According to Levine, Selvam and Parker (2003), organisms under stress react by combining the overwhelming energies of fight, flight or freeze with the associations from the traumatic event. There is a sense of overwhelm and fear, a sense that there is no way to resolve the situation (which is understandable if a child is experiencing relational trauma such as a dysregulated or angry parent). In fact, it may be said that obsessions and compulsions are a direct attempt to manage the sensory and emotional overwhelm experienced by the organism in a traumatic or highly stressful situation so that only one or a few factors are over-focused on in an attempt to make the organism or person attain a sensation of safety. This is a classic instance of over-coupling.

It became clear that overcoupling antecedents to his intrusive thoughts could be found in his childhood when, for example, he felt that if he did not swim across the swimming pool and get out within 10 seconds a “monster” would get him. One of the central tenets of SE™ is that of training the person to “ground” in the reality of the here and now (where there actually is no concrete, tangible threat outside of the thoughts or mind).

Shame and fear were overcoupled in Sam’s OCD; he stated that – while needing to over-colour something in mathematics as part of his compulsions – he was “scared that something (bad) will happen (if I didn’t colour in)”; Sam stated that he “felt sad, felt I let down ... someone” after a compulsive action.

Education was equally important as Sam needed to grasp that fear underpinned many of his responses and the obsessions and compulsions were – paradoxically – attempts to make him feel safe in his present. Researchers have discussed the central role that hypervigilance towards threat plays in creating and maintaining OCD symptoms. Borelli et al. (2015) posit that OCD symptoms are inherently focused on threat-detection processes – for instance, obsessions usually pertain to threat (contamination, injury, social exclusion), whereas compulsions are aimed at removing the threat. They argue that hypervigilance towards perceived threat is dominant in OCD to the extent that clients may be “unable to distinguish between threat and non-threat contexts”. The therapist planted the seed that not all thoughts are real and that Sam’s fear-based or controlling thoughts were an attempt to help him feel safe (not

necessarily in a rational way). The hypothesis behind the approach was based on the theory that Sam's home environment, ever since he was small, had elements of inconsistent hyper-arousal and heightened anxiety linked to his father's anger and anxiety. This appeared to weave a complex web in Sam's feelings of inadequacy and fear leading to the use of obsessive thoughts linked to controlling his environment.

Later on, guiding Sam to observe the counselling room, observe his physiological sensations, sense the gravity under his feet and the sensation of the cushion behind his back was repeatedly used to bring his awareness to the normalcy and calm of the moment and to enlarge his vision. It has been reported by Levine (2010) and others (Scaer, 2001, 2005) that our visual attention often becomes hyper-focused at the time of shock or trauma; the pupils dilate, to take in more light, in order to identify all the details of the threat to assist survival. This allows one to focus on things directly in front of us, tending to block out peripheral information; it is also referred to as "tunnel vision". Levine (2010) posits that: "When a traumatized individual is able to expand his or her sensorial impressions, associated hyper-arousal begins to ease, allowing that widened perceptual field to return to its pre-threat status, and thus enhances the capacity of self-regulation." Guiding Sam to open his vision (literally, to look around him at the room), to attune to the regulation of the context and to find a space in his body which is "comfortable" (a more neutral term) encouraged and guided him to increasingly attune to a sense of regulation.

It was imperative to assist Sam to create an internal space where he could identify "islands of (relative) safety" (quoted in Van der Kolk, 2014) on a physiological level. Siegel (1999), cited in Corrigan, Fisher and Nutt (2011), refers to this as a "Window of Tolerance". This concept depicts a process of increasing regulation of autonomic arousal in which affect and cognition can be increasingly tolerated. Siegel (1999) proposes that between the extremes of sympathetic hyper-arousal and parasympathetic hypo-arousal is a space or range of optimal arousal states in which emotions can be experienced as tolerable and experience can be integrated. From there, SE™ would assist Sam to realise and sense in his environment (at first, in the therapy room) that there was no actual threat, no judgement and no inferiority. Through body-based awareness he could start grasping that he was actually safe in the present.

In a later session it was explained to Sam that he can “remind” his body that he is safe by being aware of his breathing. He was used to releasing emotional tension through exercise and so physical release and regulation was often linked to his understanding and experience of this.

A central theme in therapy became Sam’s many conflicted feelings about his father. On the one hand, he had positive memories and love for his father: “When I young I would run to him when he came home from work and he would lift me in his arms.” But through discussion in therapy it became apparent that he was also disgusted by his father’s outbursts and criticism. These became more and more overt and explicit over time and it was apparent that Sam had not really confronted these feelings of anger before. It was hypothesised by the therapist that he had intense feelings of anger and rage against his father and guilt about those feelings (his father had a very combative relationship with another son and Sam had taken on the role of “peacekeeper” in the family system); complicating this further was his double-bind with his mother because while he was angry at his father and siblings during outbursts, especially if they were rude to his mother, she often placated her husband which they struggled with. Sam understood that his father’s outbursts were irrational and damaging to the family. The therapist inferred that Sam had repressed his anger against his father: possibly in an attempt to support his mother by lowering the heightened emotions between his siblings and his father which intensified his mother’s stress.

His understanding of himself also indicated that he wanted to be liberated from his OCD and his anxiety. He was intensely disturbed by his obsessions and compulsions, and how they dominated his life and mind. He expressed wanting to be “free” from the sense of inferiority and worry about what others thought of him and realised that the “others are just followers and I don’t have to prove anything to anyone”. And yet, what became apparent in therapy was that – beneath this – was a profound sense of shame and guilt. Shame and guilt were seen by the psychologist as being possibly linked to Sam’s conflicted feelings about or towards his father, mother, siblings (all were “in the same or similar boat” and yet Sam was also deeply upset by his sibling’s fighting with his father), his anger versus his role as “peacekeeper” and, possibly, a sense of

needing to be as good as his siblings academically without really wanting to be. He was also deeply disturbed by his intrusive sexual thoughts.

Sam turned to exercise and food monitoring to build his self-esteem. Despite increasing exhaustion and depression, he maintained a regime of exercising intensely at least three times per week and intense school work.

While using SETM as the core of the sessions, it was also important to discuss issues of self-esteem, self-criticism and distorted thinking with Sam. Early on it became apparent that a major area of focus in therapy needed to be Sam's self-esteem which was poor. It was clear that he was using distorted thinking to assess himself and was highly self-critical. For example, he thought of all the other boys at school as more good-looking than himself. He was constantly critical of his body even though he watched what he ate and worked out. Other factors identified by the therapist as impacting on his self-esteem included his siblings: Sam spoke about his "high-achieving siblings" who had both done extremely well in matric and the shame he felt in relation to them (according to Sam, his siblings also criticised him using language which was insulting and made him feel stupid).

Another factor was that Sam used distorted cognitive assumptions to underpin his low self-esteem. For example, Sam explained the logic to what we called his "superstitious thinking": he expressed that when he expected things to go well, they did not and when he did not expect them to go well, they did. So, a type of reverse thinking/behaviour belief ensued until we were able to identify it and purposefully find examples of when this did not happen. For example, a large part of sessions five to seven revolved around discussions about cognitive distortions (thought traps). Profound discussions around how he had come to certain judgements about his looks, his worth and his value were pursued in therapy. Sam was impacted by the growing awareness that I, the therapist, did not see him as he saw himself and that his cognitive assumptions was what he was identifying with a perception of himself rather than the "reality" of himself. He began to be able to take different views of himself in a situation or of others in situations.

On the recommendation of this therapist and after discussion with his mother and him, Sam consulted with a psychiatrist and was put on medication for his OCD and

depression towards the end of therapy. The therapist felt that Sam's depression and suicidal ideations were sufficiently concerning and factored into this was the knowledge that he was going on an extended youth trip towards the end of the year.

5.6 Excerpts from sessions

Near the beginning of therapy, I guided Sam to become aware of his harsh inner critic as he had a heightened awareness of his weaknesses and flaws with almost no recognition of his uniqueness, strengths, assets or resources. It was important to begin to highlight how unfair or harsh his own critical voice was and how lenient or accepting he was of others' flaws. He had also set up an unrealistic expectation of needing to be better than "average" in everything he did (linked to his self-esteem) and he was constantly disappointed with himself for not reaching this unrealistic level. This dynamic also related to intense anxiety and his driving himself to improve through fear.

Therapist: You know you have a pretty harsh standard of judgment for yourself but you judge others more favourably ... these are manipulative thought patterns ... when you tell yourself, "they are better than me" ... you devalue yourself and make them perfect. But where were you one year ago? You told me that your body was really undefined, that your marks were poor ... Do you acknowledge how far you've come?

Sam: Average means you aren't striving ... I want to look really good...(Then) I'll be happy with myself...

Therapist: Own that feeling ... own your motivation. You can also say that "what I have accomplished for now is perfect for this minute" ... what you have accomplished is great ... don't be scared that you aren't determined ... it is who you are, it's not going away ... (can you) Find a place in your body where you feel trust ... trust of Sam?

By the third session Sam had been guided to start tuning into his bodily sensations and the emotions which he attached to them.

The SE™ SIBAM model (discussed in section 3.4) guides clients to identify experiences according to five core modalities which the individual can experience: Sensation (relaxation, tightness, heat), Image (internal: memory, dreams, metaphors;

or external: an object in the room), Behaviour (posture, facial expressions, movements), Affect (feelings and emotions) and Meaning (beliefs, thoughts, analysis). The goal of the SE™ process is to build “resources”, linked either to the client’s internal sense of sensations in the body or to external sources (such as an image or music). Dr Levine posited that the body has a self-balancing mechanism; that is, once you guide your client to perceive and mindfully identify the sensations of the here and now (such as his back’s contact with the chair, an object in the room etc.), resourcing through the body brings about a sense of safety to the body and mind.

As expressed by Sam, his experience of the obsessions and compulsions kept him overwhelmingly in his head, controlled by thoughts and feeling that he felt unable to resist: “Thinking is huge ... in my mind” and having to constantly self-monitor in order not to repeat “makes my brain go crazy”. This was expressed with a sense of great tension and anxiety. The aim was to bring his awareness to the sensations in his body in order to allow him to move out of the mind, to release symptoms from the nervous system and in order to restore some balance to the body, heart and mind. In this way, the body is introduced as a resource where often a neutral sensation or even a sense of comfort can be found at least in one place.

Sam: I’m self-monitoring my thoughts all the time ... in therapy as well ... (I have to) think far back to check if I repeat anything ... have to distract my mind with any thoughts so I don’t repeat ... otherwise I’ll change my luck, will change my relationship to people, my shyness.

Therapist: Let’s go to that feeling (Sam scrunched up face) ... find a place in your body which feels good or neutral, placid, peaceful.

Sam: I wanted to be a gymnast...my lats feel peaceful...

Therapist: When the anxiety comes allow it to come and go to your lats and acknowledge that there is a part of the body which is peaceful (Sam’s face is calm, breathing is deep).

We explored the history of the anxiety and the “lifetime of the OCD” as Sam phrased it. Although SE™ doesn’t necessarily focus on talking about or reliving trauma, it was considered valuable to help Sam gain insight into the stress and anxiety which seemed

to culminate in obsessive thoughts and compulsive actions. For example, he came to understand that, very often, increased stress or anxiety preceded the obsessions.

Therapist: Go to the body, tell me what you felt when you woke up this morning, when you thought “here goes another day of OCD”?

Sam: A lot of fear ... when I wake up and my OCD starts happening ... I'm like “this is what caused so much trouble” ... two years ago in grade 7, OCD was telling me what to say, what not to say – feel like it has destroyed me.

Sam went to a place in his body, identified below the belly button.

Therapist: What is that feeling?

Sam: Shame, fear.

Therapist: If you would give the shame a colour, what colour would it be?

Sam: Purple, deep purple ... difficult to stay with it (observation: eyes twitching) ...shame... making my hands pump more blood, head throb...

Therapist: What colour could you give it?

Sam: Yellow ... making me very tired.

Therapist: If shame could say something, what would it say?

Sam: “Fuck you”, “you messed your life up...”

Therapist: Can you find a place that feels good, normal?

Sam: No real feelings in shoulders but they feel broad, outgoing, laterals feel strong.

Therapist: Stay with the feeling ... shoulders that are strong ... what does it say, could you give it a colour?...gold?

Sam: “You're a lekker oke.”

Therapist: Say it slowly, and feel it and own it in your body.

Sam: Shiny gold, metal, hard ... feels like meditating ... (Observation: deep breathing, eyes are not twitching, looks calm)

Therapist: What's happening to feelings in shoulders? and purple in stomach?

Sam: Was pumping gold against the purple, now it's calmed down.

Until this point, Sam had not been able to construct a coherent story or narrative of his OCD or fear; over time it became possible to understand many aspects of the story. Sam had a strong sense of responsibility and even guilt for his “mom's suffering”; he saw her as working hard and bearing the fallout from his father's anger and the fights

between his father and his siblings. Sam often took on the role of peacemaker, or was the easier child in order to try to support his mother.

Prompting Sam to go to the sensations in his body allowed us to begin to identify feelings of shame, beyond the anxiety, which were often linked to sensations of exhaustion. Sam identified that he had felt shame about his looks ever since he was a young boy. He also felt stupid when comparing himself to his siblings (despite being close to his brother) when he asked for help with school work. His brother showed indications of irritation and anger which reinforced a sense of shame. Sam developed perfectionistic traits often comparing himself to others: “he's perfect and I want to be like him ... if I say something, I'm afraid I'm going to get it wrong”. It was valuable that Sam had a very positive connection with his body through his exercise programme and was often in touch with its strength and ability. Using this sense of the body allowed us to start developing “islands of (relative) safety”, a term coined by Dr Levine to build a self-healing mechanism through the body or a “window of tolerance” (Siegel, 1999, cited in Corrigan et al. 2011).

Therapist: What's the fear underlying the belief?

Sam: I won't have a good relationship with anybody, I'll get bad marks, something bad will happen to my family (felt a drop in his throat) ... I want to be myself ... argue with myself ...the OCD is telling me to be something else...

Therapist: Get in touch with that feeling ... “I want to be myself”– (looked peaceful, eyes closed). What does that feel like?

Sam: Hint of fuzziness, good fuzziness...

Therapist: Stay with it, repeat the words, “I want to be myself.”

Sam: The fuzziness is a yellow ball with white hairs waving.

Therapist: Focus on the image ... can you imagine the feeling spreading?

Sam: It's like the sunrise...

It is interesting that, over the course of a few sessions of tracing the shame, perfectionism and OCD, Sam began to feel sensations of tremendous depression and anger rather than shame. He came in after one session after a screaming fight at home and angrily vented about the hypocrisy of his father and expressed that his father was damaged. He expressed that when his dad screams, he feels “fight and flight (feel

both)” in his body. According to Levine (2010), this is a feeling often associated with parasympathetic paralysis, that is a sense of wanting both to run and fight back, while not being able to do either or any. He ended this session by acknowledging that he felt both anger and sadness in relation to his father which reflected both an ownership of his feelings and a greater degree of self-acceptance.

Throughout the sessions, Sam moved between shame, despair and anger, which were viewed by the therapist as the interlinked aspects of a multi-faceted feeling of dissonance within himself and between his lofty or harsh self-expectations and who he was in the world. Times of criticism and dysregulation at home seemed to have inculcated a wariness with being less than perfect. There were also times of shared enjoyment and caring in the home. This was intricately linked to anxiety, obsessions and compulsions as an attempt to keep his world safe. Sam expressed a chronic foreboding sense that “something bad would happen” and this could be staved off – according to the illogical “logic” of the OCD – with compulsive actions of ensuring that things were never repeated. Furthermore, Sam shared a sense of worry about mom and her stress levels as mom was in many ways his only island of safety in a sea infested with sharks, and choppy waters.

In the next session Sam came in after having had a fight at a soccer match at school. During this session we identified the various neuropsychological stages he moved through.

Sam: It (the fight on the soccer field) was emotionally draining ... (described what happened to start the fight and explained the various feelings and sensations such as an adrenaline surge while shouting, feeling activated and then a sense of collapse) ... I felt strong and weak, strong and weak ... as soon as the adrenaline hit, I felt as if there was a threat.

Therapist explained how the exhaustion was understandable after the activation and the sense of threat. Furthermore, the therapist was reminded of the freeze response and asked Sam if he had ever gone into freeze as a child, he said, “Yes, when my dad was screaming”.

Sam struggled to maintain eye contact with myself for any extended period of time and expressed finding eye contact extremely difficult and discomforting. Peter Levine

(2010) speaks about eye contact and difficulty with sustaining this which, he posits, may be linked to relational attachment trauma.

Sessions integrated the action of being in the present moment and opening Sam's vision to the whole room with sensations of self-acceptance just in the fact of existing in the present. By the third session more time was opening up to acknowledge the sensations, images and feelings linked to feeling comfortable with himself. Sam shared that there was a sensation of "a hint of fuzziness, good fuzziness" and when asked to bring an image to the sensation he said there was "a yellow ball with white hairs waving ... It's like the sunrise...". Sam was encouraged to get in touch with that comfortable sensation and image. He immediately moved into doubting the feelings and expressed that he felt that he was "trapped ... behind popularity, external, OCD, self-esteem" (hand holding up face).

In the fourth session it became apparent that while carrying out the compulsions brought a momentary sense of relief to Sam, there was a feeling of betrayal of self which, upon exploration, appeared to be underpinned by "a lot of fear ... scary creepy monsters". It became apparent that OCD is highly paradoxical, attempting to provide a sense of order, control or protection to the person but very often through reinforcing the fear or a sense of fear. In Sam's case, the OCD was also overcoupled with shame and guilt (possibly because it was linked to anger).

In line with the concept of pendulation which is central to SE™, Sam was continuously guided to move between a sense of comfort or calm in some part of his body and then to move towards the sense of conflict going on in his mind. For example, he was able to identify a sensation of strength in his shoulders during a session and asked what words this sensation might give voice to. A positive self-message was expressed and Sam was guided to say it with increasing feeling and to slow it down. This allowed the "non-conscious" and uncritical part to gain increased exposure and to be heard which it had not been allowed before. This identification and release are viewed as central to the client's ability to work towards internal regulation.

The sensation, image or feeling was purposefully intensified through the guidance of the therapist:

Therapist: How could you make it feel more good? What would complete happiness look and feel like, what would it say?

Sam: A hollow fuzzy ball filled with small sculptures, suns ... sculptures are very small suns ... feel a little sense of hope.

Therapist: Breathe into the hope, bringing oxygen and life into it, you can move around it, you can tell me what it symbolises, what it says about Sam, can it talk to Sam? What would it say?

In line with SE™ theory, it is vital to uncouple many of the associations which are made between the body sensations and emotions which become bound together during trauma or heightened anxiety or stress. Sam's obsessions and compulsions were viewed in this light. In describing coupling dynamics, Levine, Selvam & Parker (2003) state that: "(T)raumatic coupling is a certain configuration in the body-mind system that occurs after a trauma and that serves to hold and bind the overwhelming energies of the trauma." They posit that the person will adapt to a threat by using adaptive patterns which become the "template for discharging and/or binding and coping with any arousal that is overwhelming to the organism".

Sam was strongly identified with the idea that if he kept pushing himself, he could attain the levels of fitness and ideal weight which were important to him. However, he was also driving himself to exhaustion and constant criticism that he was not good enough. The positive image and meaning of a healthy body had become overcoupled with self-esteem, perfectionism and social acceptance. He found it extremely hard to let go of the critical voice and was scared that, without it, he would not keep working hard at fitness and that he would battle even more with motivation.

A later session continued with working on a deeper connection to the various experiences and levels of regulation in Sam's physical experiences. As evidenced here, Sam often complained of feeling exhausted and drained.

Sam described emotions and sensations he had experienced that morning:

Sam: I was walking up the road...

Therapist: How were you feeling before that?

Sam: I felt, "Shit!, here goes another day of OCD"

Therapist: Where is the sensation of “Shit! Here goes another day of OCD”? Go to your body and sense it...

Sam: I just did...

Therapist: And tell me where it is (Sam indicates solar plexus).

Therapist: And if you could imagine something there, what would it be ... in the space where you do this ... hand movement?

Sam: A scary, creepy monster ... it's weird but there's a lot of fear but also caring ... which I want to get rid of ... don't want to care what others think...

After exploring the sensations linked to this fear Sam moved towards an experience of safety in his body:

Therapist: Tell me what's happening to feelings in shoulders?... And the purple in stomach?

Sam: At the beginning it was pumping gold against the purple, now it's calmed down...

Therapist: Let the feeling move through your body ... you can use breath. Do you feel safe right now?

Sam: I feel safer...

Therapist: Where do you feel safe in your body?

Sam: My lats. My shoulders are like defending off the purple ... gold is spreading ... soft gold not a shiny gold...

Therapist: Let it come, that's the real you ... let it come into your body and settle there.

Sam: It also says I'm good looking but that doesn't make sense because I'm not good looking ... purple went more...

Therapist: The purple is some kind of shaming or negative self ... You can have all your imperfections ... even the disgusting parts are okay ... all of Sam is okay ... it's okay to have all the shadow and all the light...

The therapist moved onto asking what happiness would feel like in Sam's body and what it would say to Sam. Sam described images (“small suns”) which would feel like “a little sense of hope”.

At a later stage, it was explored that Sam could choose not to be activated by the fear or anxiety of his father and that he could evaluate whether the threat was real or not

and/or serious or not. For example, in session nine, the therapist and Sam clarified his father's perception and how Sam had inculcated this but also that he could feel safe in his body in the here and now. This was an important and empowering awareness which Sam began to explore and claim more and more.

Therapy encouraged Sam to put his father's anger outbursts into perspective in order to manage his own activation. This required education, that is Sam needed to understand that his father was dysregulated and became highly anxious around specific issues which triggered him (these were very often related to financial issues such as leaving the fridge open too long/beyond the 15-second "rule"). Through psycho-education, however, he started realising that he did not have to "buy into" his father's fears, that he could take a "bird's-eye view" and ascertain whether the fear was really threatening. In session 5, the idea of grounding through the body was discussed. Sam was encouraged to use the sense of gravity through his feet on the ground to reinforce the idea and sensation that his world is actually secure and solid.

Therapy attempted to get Sam to remain in touch with a sense of safety and security in his body and the realisation of himself being "good enough". Following on from this, the subsequent sessions entailed centring and grounding in his sense of reality. This frequently entailed Sam moving to an awareness of his body which was a source of centredness and strength for him, especially once his body judgements were contextualised using education around cognitive distortions and his role in maintaining a sense of shame. Sam shared his intense stress and a sense of depression resulting from intense feelings of inadequacy. It became clear that feelings of shame, fear and inadequacy created a complex web which utilised cognitive distortions (devaluation of self, manipulative thought patterns, including the obsessional thinking that if I do x I will be safe), neurophysiological dysregulation, social comparison (externalised self-esteem) and a sense of inadequacy ("I'm always not good enough" which included possible borderline body dysmorphic thoughts).

It was clarified with Sam that he was always aiming towards perfection and when he was not punishing himself towards the goal, he was feeling that he would not get there. Of course, aiming towards perfection was viewed as a good goal by Sam but it also needed to be understood that he was judging himself by the end point which he clearly

had not reached yet at the age of 16. In this way, he was always seeing himself as a failure. Instead, he needed to acknowledge his accomplishments and strengths such as his perseverance to attain his health and fitness goals. We integrated somatic experiences of this attainment into sessions so as to increase his self-acceptance and to deepen and integrate a sense of enjoyment of his accomplishments (which were many).

It was a constant challenge for Sam to move away from the preoccupations in his “head”, so that the cognitive distortions and obsessions were not controlling him. There were times when he could move away from them and literally “touch” the sense of being safe and okay in the present. However, this was extremely challenging and irregular; Sam would speak about feeling like he had PTSD, a sense of fright when his father screamed, like feeling fight and flight at the same time.

At times, Sam had mentioned the idea of suicide and it all just being too much. The therapist met with him and his mother and recommended seeing a psychiatrist to advise on medication. Sam was put on Zoloft and a sleeping pill.

By session 11, Sam had started to sense that facing the obsessions and compulsions was very hard and scary but he was getting better at confronting them. He had now started trying to resist the compulsions and do the opposite of what “they” were telling him to do. He had also identified a quote which was meaningful to him as a new kind of dictum – “strive for progression not perfection”. He was reading *The Growth Mindset* by Dr Carol Dweck (2008) and was finding it encouraging of many of the principles we were discussing as well as developing other ideas further. He had started identifying his own thought patterns and language which reflected a “fixed mindset” (Dweck, 2008:13) such as saying or believing that “everything” is a failure. The therapist had been talking about “thought traps”, which is another word for cognitive distortions, and which include black-and-white thinking and all-or-nothing thinking. Sam would frequently flip into self-criticism and a sense of failing himself even after discussing these concepts. When he ate too much or incorrectly, he would speak about “disappointing” himself.

He had also started meditating using YouTube videos to guide him. The therapist used the idea of meditation to revisit the concept of regulation and “calibration” which had been discussed in an earlier session. The example of a computer was used to explain that when something gets overheated, it can reverberate at too high a level. Similarly, people who have either early or chronic anxiety have nervous systems that are calibrated at too high a level. Part of the calibration or re-adjustment process was the tuning into a feeling of safety, as well as allowing sensations around self-acceptance and forgiveness to enter the mind.

In a later session, Sam expressed that he was feeling very aggressive; the therapist shared that this was almost the opposite of the despair he had been feeling previously. In SE™ terms, it was hypothesised that this could be viewed as the uncoupling of fear from the freeze response, the lifting of the “break” on the parasympathetic nervous system. It was understood that Sam had adopted the role of the “peacemaker” in the family home; this is how his mother described him initially and how he saw himself. However, it is felt that actually Sam had repressed a strong feeling of anger against his father and possibly other family members, maybe even his mother, to fulfil this role. The repression of anger had resulted in feelings of depression and anxiety.

As Peter Levine frequently explains (2010), the parasympathetic system can be likened to the brakes in a car. Excessive pressure by the brake, however, can lead to the freeze response. According to Roelofs (2017) the freeze response is actually the activation of the two counteracting branches of the ANS, the sympathetic and parasympathetic nervous systems. He says: “it is important to realise that the physiological parameters of freezing therefore consist of both sympathetic and parasympathetic features, which vary depending on which system is dominant at a certain point in time.” Sam was habituated to using the brake in order to control his anger but allowing him to experience his anger was vital to allowing him to gain a full sense of self.

As evidenced in the excerpt below, he also expressed suicidal ideations and the desire to give up he had recently experienced social rejection by some friends and was feeling very depressed.

Therapist: Go to the hurt you felt ... where did you feel it?

Sam: (he put his hand on his solar plexus) There's a hole ... a source of energy drainage ... It's pulling the energy in and putting it out (hand movement out).

Therapist: Like depletion? ... interesting because it is actually what you are doing when you look at someone else for their opinion ... Can you put your hand on the energy leakage ... does it change anything?

Sam: A little bit ... I'm very hopeless.

Therapist: You're allowed to be in pain; you're allowed to cry; it is a painful time in your life. I would like you to feel how real and whole Sam is even if you aren't accepted by others ... is there any way you can touch or feel the sensation that "I'm ok"?

Sam: No.

Therapist: Take a deep breath, look around again ... anything else that you notice?

Sam: Old habits and shit ... getting aggressive ... ridiculous...

Therapist: It's not ridiculous ... let's go to the aggression ... where do you feel it?

Sam: Arms, muscles...

Therapist: Angry, hot ... if they could find a voice what would they say?

Sam: Fuck you world!

Therapist: (encouraging movement with the words)

Sam: Can't do movement ... too drained...

Therapist: The anger is very important in the OCD and the hopelessness.

Sam: I don't care about anything ... don't want to be here, don't want to do anything...

At a later stage, therapy also focused on the ability to remain with a sense of unease or anxiety and to not "buy into" the message of threat or fear. We had undertaken an exercise in the session whereby we used the perception of viewing an object from different perspective to highlight that we can move away and towards our emotions at times. We described a drum using different approaches e.g. a factual description, a description which made association and assumptions about where the drum may have come from.

Therapist: As when describing the drum ... you can focus on what you see without emotion....

Sam: I just ignored my OCD right now ... I sometimes zone out and see people blurry ... (my OCD) said if I look at you like that I'm going to have bad luck.

Therapist: How do you feel inside right now?

Sam: Anxious.

Therapist: Where do you feel this?

Sam indicated his solar plexus area.

Therapist: How do you feel that you ignored it?

Sam: I feel relieved or shocked ... surprised that I could do that.

Therapist: And if you could find (the feeling of being) relieved somewhere in your body, where would that be?

Sam: Here ... (indicating top of left hand and top of wrist).

Therapist: How does it feel to put your hand on it?

Sam: Comforting ... feels like my mom's hand, comforting...

Therapist: Now when you go to the anxiety, is it still there?

Sam: It's calming down a little bit...

Therapist: When you find other parts of your body where the sensations are different, we can change our body and our mind (deep yawning).

Working on uncoupling his self-esteem from his fear and anxiety allowed us to work on self-acceptance. One of the most telling signs of this uncoupling, in my view, was both an overall sense of greater calm and – most significantly – that Sam was able to maintain eye contact with people he was speaking to now. While eye contact was something that Sam had discussed in previous sessions, it was not something that we had directly worked on. However, as seen in the excerpt below, Sam shared that he was encouraging himself more and more to maintain eye contact and he was finding himself increasingly able to do this. Maintaining eye contact is a powerful indicator of the shift in Sam's self-constructs.

Sam: I'm learning to stop giving a shit ... when I forget about my OCD and go out of my comfort zone, it feels so good ... I'm very shy but when I let go and do something I feel so accomplished ... my OCD just said that I won't feel accomplished...

Therapist: So, let's go to the part of you that says you aren't accomplished ... go to the comfort in your hand and just hold it and see how you feel about that statement.

Sam: I actually forgot about it...

In the second last session, Sam explained that he had finally had his appointment with the psychiatrist. From the beginning of therapy, he had revealed suicidal ideations and serious depression. Based on the duration and severity of these, the therapist had met with Sam and his mother and recommended that he go to a psychiatrist. The psychiatrist put Sam on Zoloft

Towards the end of therapy, Sam had started to finally start feeling more positive feelings and sensations and was able to self-regulate hyper-arousal to a far greater extent.

Sam: I looked at my body and started laughing out of joy ... realised that I am happy with myself.

Therapist: Look back and realise how far you've come ... you used to have a fear that there were monsters hounding you.

Sam: Even during exams I've been working out ... chilled all day, going home to work out and then learn for exams.

Therapist: This is normalisation without guilt.

In one of the final sessions, Sam felt that the "mind/muscle" (sic) connection was a lot stronger. He also shared that he felt his anger "shifting" and that, at times, he had greater ability to control the anger. A valuable insight he shared was that he felt the therapy sessions were shifting onto his emotional features rather than his obsession with his body and his looks.

5.6 ASSERTIONS

A number of aspects became clear as the therapy progressed. In line with the foundational theoretical approach of the bioecological model, it was apparent that the first and most critical factor influencing the individual is that of the immediate system – the family. The complex interaction of family "constellations" (the particular configuration of multiple factors including genetic, historical, social, educational,

religious, moral and more) plays a significant role in influencing psychological and neurophysiological development. In Sam's case it seemed clear that his father's historical and ongoing heightened emotionality and anxiety (which was seemingly often expressed as anger), along with probable genetic predispositions, was a recurring destabilising feature of the family landscape. Sam's sense of self and his self-constructs were strongly influenced by his high-achieving older siblings who lived at home and who both had elements of psychopathology including OCD and depression; Sam expressed feeling ashamed or inadequate at times with his siblings (possibly when they lost their temper with Sam). Sam's mother played a significant but conflicting role in trying to combat her husband's anger at situations which sometimes involved the children but she also protected her husband at times and possibly enabled his behaviour in part. Sam felt strongly attached to his mother and possibly over-responsible for the weight that she carried in the home. It also seems significant that Sam, as the last born, took on the role of the "peacemaker" child or rescuer.

Sam appeared to bear a heightened reactivity to the conflict in the home and to his father's anger (which he came to understand was actually anxiety or fear about the world). He expressed in one session that he felt like he had PTSD and would have a physiological reaction of flinching when his father shouted. He also identified that this heightened impulse was apparent at other times when there were loud noises.

The above resulted in Sam having a strong underlying sense of inadequacy certainly by the time he started school. He remembers feeling shy, extremely self-conscious and inadequate. Over time, it is posited, he came to feel responsible for more than he could really bear and certainly for his mother's situation in the family dynamics. This led to increasing anxiety and shame until a trigger of extreme stress brought about by exams, seemed to tip him over into OCD. Sam clearly remembers developing obsessions and compulsions during a particularly stressful time during grade 7.

According to the diagrammatic representation below, Sam's sense of innate and underlying shame or inadequacy created an externalised sense of worth and locus of control. This resulted in a heightened vulnerability and sensitivity to others and responses in his environment. When triggers and stressors arose (familial, academic or social), Sam experienced neurophysiological dysregulation and hyper-arousal. This

led to actions and thoughts characteristic of OCD as well as feelings of shame, guilt, self-blame and anger.

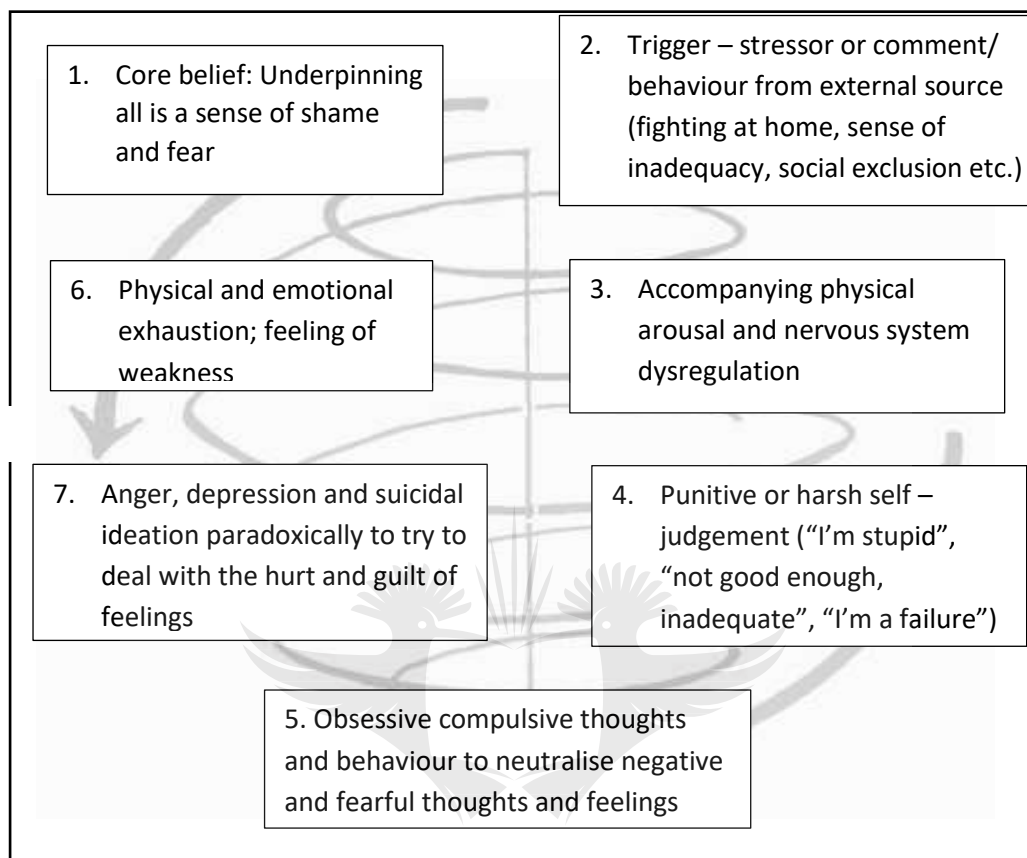


Figure 5.1 Sam's pattern of psychopathology

Based on this understanding of the case, a diagnosis of trauma-based OCD seemed fitting and SE™ was implemented. It was felt that Sam would need to be able to identify an internal sense of emotional safety through regulating his neurophysiology. This was relatively easy given that Sam was highly attuned to his body through exercise and consciousness of this own health. Once Sam became attuned to a present of achievement, acknowledgement and a sense of physiological safety, he was better equipped to deal with dysregulation. Then we were able to start working with the over-coupling which underlay the associations. Most significantly, the use of SE™ in building the client's ability to discern the difference on a neurophysiological level between habitualised fear and the present reality which is one of safety. Other dynamics including cognitive distortions, enmeshment in family dynamics and guilt were dealt with as well over the course of therapy.

5.7 EXPERIENTIAL NOTE

In general, it is important for the therapist to be attending her own ongoing therapy and SE™ sessions in order for her to be exploring and working with her own neurophysiological arousal in order to assist the client in managing his own regulation. However, what I found most challenging about this case was the subtle interweaving between the intersubjective psychotherapeutic approach which pushed the client to unearth the suppressed hurt and dysregulation and Somatic Experiencing which to a large extent was working on bringing Sam into the present to orientate and ground himself.

It should be remembered that this study is based on the particularities of one complex case. The specific proximal and distal factors relating to this family and Sam's particular experience in his family are highly individualistic. Furthermore, the fact that Sam was highly attuned to his body through health and fitness awareness, appeared to assist in him tuning in to internal neurophysiological resources. According to the underlying theory of SE™ which is based on the functioning of the deeper regulatory levels of the nervous system, this appeared to make it easier for him to make the body/mind connection and to assist the freeze response to subside. Sam was already using breathing to regulate his heart rate while exercising and was acutely aware of his internal sensory reactions to his feelings of being healthy and fit. However, SETM gave him the terms and constructs to use these in his emotional life to calm his "core response network" system. It is interesting that Sam spontaneously started looking up videos on meditation and started assisting himself to breathe and down-regulate arousal.

CHAPTER 6

FINDINGS AND DISCUSSION OF FINDINGS

6.1 INTRODUCTION

In this chapter, I will describe the themes and extended meanings generated through the qualitative analysis of the therapy sessions as presented in Chapter 5. I will attempt to analyse the value of the meanings extracted in light of the research and insights shared in Chapters 2 and 3 and with an awareness of practice options and approaches available to therapists.

As this is a phenomenological case study, the value of the study and the findings is extracted from the qualitative investigation (including transcripts of sessions, analysis, supervision, thematic extraction and coding) and ideas generated. The interpretivist constructivist approach posits that reality is constructed in the mind of the individual. Rennie (1994:6), cited in section 4.4, states that:

The constructionism of qualitative research means that the product of its activity is not truth in the foundationalist sense, but instead is understanding.” Furthermore, as he posits, it is not the understanding, but rather “*an* understanding – one that is contextualized in the interaction between the thing investigated and the frame of mind of the researcher.

Gergen (Gergen & Gergen, 2008; Gergen, 2010) goes further and reasons that any situation has multiple realities, and that those realities can be explored and meaning made of them or reconstructed through human interactions. Therefore, even this research can be reformulated in the minds of the reader and contribute to new understandings of individual contexts of which the researcher is not aware.

In line with the phenomenological interpretive approach, with its emphasis on the subjective construction of knowledge, the researcher is viewed not as an objective spectator but as an active participant in the creation and co-creation of knowledge with the client (Schwandt, 1994). A therapist brings her own worldview and psycho-theoretical stance to her sessions and, in this case, to her research. In the case of the

present author, experiences with OCD (and the latent discovery of a probable link back to relational attachment trauma) engendered a deep interest and motivation to explore the inter-relationship of trauma and OCD and the treatment options available. As part of a general interest in further education and upskilling, I was exposed to the theoretical foundations of the treatment methodology of Somatic Experiencing™. After this, I began to rethink the possible causes and drivers of OCD. Identifying the role of neurophysiological stress on the nervous system, I began to formulate a question – could the obsessions and compulsions which define OCD actually be linked to the dysregulation of the nervous system and, if treatment attempted to address this, could it assist those who experience OCD? Of course, as Schwandt (1994) posits, the researcher (and the therapist) must follow “a normative sense” of method: “The interpretation or decision one makes cannot properly be said to be verifiable or testable ... at best, we can appraise the interpretation by applying norms or criteria that are compatible with the very condition that demands we interpret it in the first place.”

From research and clinical practice, there appears to be a case to be made for the value in identifying preceding anxiety and nervous system arousal. Based on clinical experience, I believe there is a pattern of OCD resulting after a history of chronic anxiety or fear. When this is the case, it may be presented that the resulting OCD is a symptom of underlying chronic stress, anxiety or trauma. At the end of the day, in all therapy, the client him- or herself must attest to the value of the treatment approaches.

Interpretative Phenomenological Analysis (IPA) (Saldana, 2009) was utilised as a coding technique in this study. It is an accepted methodological framework for qualitative studies (Pietkiewicz & Smith, 2014). According to Pietkiewicz and Smith (2014), IPA emphasises studying people ideographically in that its goal is to explore and generate detailed descriptions of how individuals experience phenomena. According to Saldana (2009:47), coding methods depend on the nature and goals of the study; most methods are not discrete and may overlap slightly in function. Following on from this description and once the researcher has read and listened to the transcript a number of times, she formulates a concise phrase for main ideas related to the study at a slightly higher level of abstraction (such as a psychological

conceptualisation). Then she looks for associations between developing themes, grouping them together according to similarities, and providing each cluster with an explanatory label. The next stage is to compile themes for the whole transcript and then to look for connections and clusters. A final list may comprise of numerous superordinate themes and subthemes (Saldana, 2009:12). Saldana further clarifies that a theme is an outcome of coding, categorisation and analytic reflection. In order to improve trustworthiness, he recommends discussing and validating findings and coding with the participants and suggests that these opportunities articulate internal thinking as well as presenting windows of opportunity for clarifying emerging ideas and themes (Saldana, 2009:188).

Joseph Maxwell (2009:244–245), cited in Yin (2011), recommends the following strategies for combating threats to validity. These include intensive field involvement, rich data, respondent validation, search for discrepant evidence, triangulation and comparison. According to the current author, the most basic and critical strategy for ensuring internal validity in a psychological context is based on the central tenet of the humanistic or Rogerian approach to therapy which espouses that the client has the answers, and will move towards integration and actualisation of their core values of self. This was evident in the therapy sessions and in the progress of achievement of therapeutic goals.

6.2 THE PROCESS OF THERAPY

The process of therapy is presented below diagrammatically: as presented in Chapter 5, the factors of psychopathology are shown in the left-hand boxes (with a white background); the process of therapy in changing Sam's patterns of response is shown in the right-hand boxes (with a grey background). Based on the 20 therapy sessions, the sessions were analysed and themes extracted using the process of Interpretive Phenomenological Analysis (IPA) (Saldana, 2009) as discussed in detail in section 4.7 above.

These themes presented here are reflective of the process of analysis based on psychotherapeutic training and clinical supervision:

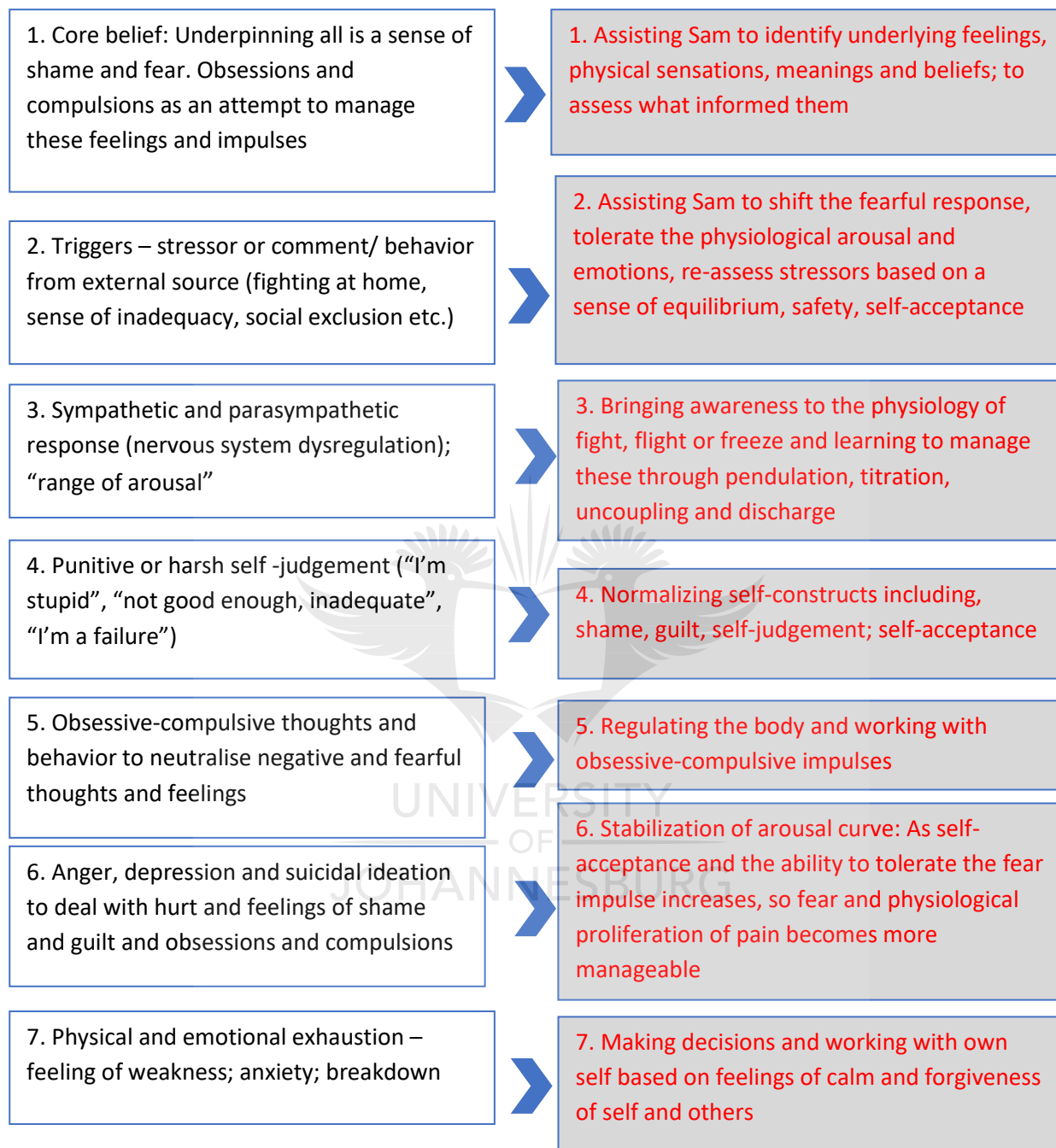


Figure 6.1: The process of therapy with Sam

As discussed in more detail in Chapter 4, the Interpretative Phenomenological Analysis (IPA) method presented by Saldana (2009) formed the structure of analysis. Once the sessions were watched and analysed, I was able to identify the main biographical and emotional features identified by Sam himself. This allowed me to begin to deduce concise phrases for the main ideas presented in the oral discourse underpinned by my main theoretical stance of the bioecological systemic approach.

For example, when Sam was describing a fight between his father and brother, I would identify that as a 'family context' issue including both "sibling factors" and "negative father interactions" based on Sam's interpretations and judgements. When his father's outbursts created a sense of anxiety and fright in Sam, I would identify that as his "father's dysregulation", interacting with or causing intense "anxiety" in Sam and "family discord". An analysis of patterns allowed me to then group the multiple concise phrases together to arrive at descriptive features which delineated this client. This was informed by theory and required ongoing reading into areas which arose from the sessions including the link between the developmental aspects of anxiety, the role of family factors in the client's sense of internal emotional safety, the role of self-constructs and how they affected self-agency, a sense of shame and its relationship to anxiety, a sense of (over) responsibility and its link to OCD etc. Using IPA requires a bidirectional and ongoing analysis of patterns and their relationships to overarching themes and theories. After continuous analysis of patterns and refinement of factors, I identified superordinate themes which coalesced at a higher level of abstraction (Saldana, 2009). These are presented on the following page and are represented under "Themes".

Concise Phrases	Descriptive Label	Themes
<ul style="list-style-type: none"> • Anxiety (in response to stressors) • History of anxiety • Adolescence • Shame • Guilt • Depression • Suicidal ideation • Bioecological factors • Father's dysregulation • Father's positive aspects • Mother's role • Sibling factors • Family context • OCD • Control of life factors • Self-esteem • Anger/aggression • Physiological activation • Over/undercoupling • SE™ awareness of environment • SE™ body sensing • SE™ imagery • SE™ meaning 	<ul style="list-style-type: none"> • Multiple factors affecting OCD development (bioecological factors shame, guilt, anxiety and history of anxiety, depression, anger) • Lack of emotional safety in core relationships in childhood (father's dysregulation, sibling factors, mother's role) • Self-regulation (triggers, physical activation, SE™ processes) • Exploring trauma (over/undercoupling, depression, suicidal ideation, shame, guilt, anger, physiological activation) • Self-constructs (self-esteem) 	<ul style="list-style-type: none"> • Identifying multiple factors underlying trauma-based OCD • A range of treatment approaches to treat adolescent trauma-based OCD • The role of lack of emotional safety in core childhood relationships in trauma-based OCD • The role of self-regulation and finding an internal sense of "relative safety" • Exploring the dysregulating trauma while building a sense of "safety" in the nervous system • The role of psycho-education around cognitive distortions and self-constructs

Table 6.1: Compilation of themes

6.3 DISCUSSION OF THEMES WITH RECOMMENDATIONS FOR PRACTICE

Overarching themes were extracted from the current study based on the analysis provided in Table 6.1. These were also informed by insights gained from supervision sessions, theory and research and the therapist's own psycho-development during the process. Implications for practice are included at the end of each theme discussed below.

6.3.1 It is necessary for the therapist to identify the multiple complex factors underlying trauma-based OCD in adolescents

The first theme that became apparent was the important awareness that there are often multiple and deep underlying factors contributing or causing adolescent OCD. Presta et al., (2003) posit that childhood-onset OCD is often preceded by other anxiety disorders (such as separation anxiety disorder, panic disorder with agoraphobia, social phobia), mood disorders (bipolar and unipolar depression), eating disorders (anorexia), psychotic disorders (usually schizophreniform or atypical psychoses), or attention-deficit/hyperactivity disorder (AD/HD). Furthermore, Gallagher and Cartwright-Hatton (2008), cited in Timpano et al. (2010), found that aggressive or volatile parental discipline fostered greater reliance on cognitive distortions (e.g., catastrophising, selective abstraction) and metacognitions (e.g., 'I constantly study my thoughts' or 'I do not trust my memory')."

While fear and resulting anxiety may be the consistent underlying factor, it is presented here that shame, guilt, a sense of (over-) responsibility and possibly repressed or unexpressed anger are also significant underlying factors.

It is interesting that research on parenting styles and OCD in childhood indicates that parents and children in the OCD group could be clearly differentiated from families in the other groups based on parent and child behaviour. "Mothers and fathers of OCD children were less confident in their child's ability, less rewarding of independence, and less likely to use positive problem-solving. Children in the OCD group showed less positive problem-solving, less confidence in their ability to solve the problem, and they displayed less warmth during their interactions with their parents" (Barrett et al., 2002:605). This was reflected in the case of Sam.

There is the view that, regardless of the causes and symptoms, OCD should be dealt with through the approach of identifying distorted cognitions and challenging these through the use of CBT and ERP. However, it is presented here that when there is neurophysiological reactivity and fear, this should be addressed with management of nervous system regulation as a means of establishing some sense of "relative safety" (Levine's term) in the neurophysiology of the client. This may be particularly true of refractory OCD in adolescence. It may well be that OCD is sometimes more a

symptom than a cause and that intense anger with repression, primal guilt and shame are more causative (Basile, Mancini, Macaluso, Caltagirone & Bozzali, 2013).

Levine (2010: 89) highlights an interesting “Gordian knot” of anger, fear (of violence or retaliation), repression and shame which appeared to be applicable to this case. Through exploration, it became apparent that Sam was extremely angry at his father which may have resulted in a kind of splitting off as he was also the “peace keeper” in the family system. Sam was agitated and activated at times by his father’s outbursts and in many instances these outbursts were followed by fights between his father and his siblings as well as between himself and his mother. Depression, suicidal ideation and exhaustion would frequently infiltrate Sam’s daily experience.

It was apparent that Sam had a poor foundational self-esteem when he entered therapy. Sam recalled that his sibling helped him with a subject which he found very difficult and his sibling was impatient and critical when Sam did not grasp the process. Sam expressed that he felt embarrassed and shamed by this. Sam would, at times, come to sessions feeling attacked and fragile. He felt chronically inadequate compared to his peers and to his siblings (academically). Sam expressed feeling challenged with social issues such as intense shyness amongst females which appeared to date back to grade 1. He currently experienced an intense sense of inadequacy around teenage girls and a sense of inferiority to boys of his own age.

6.3.2 It is valuable for the therapist to be able to use a range of treatment approaches to treat adolescent trauma-based OCD depending on the details of the case

The humanistic approach (largely typified by the person-centred approach developed by Rogers in 1986) was a significantly valuable and consistent approach integrated by the my degree in psychology and through mentorship and supervision. It has always been a major part of the therapist’s stance; however, it was particularly relevant in Sam’s case given the underlying issues of shame and chronically low self-esteem identified in Sam.

In synchronicity with the foundations of SE™, Rogers's approach (1986) espouses that the three characteristics of *congruence*, *unconditional positive regard* and *accurate empathic understanding* form the core of the therapeutic relationship. These align to the SE™ principle of the restorative value of social engagement (Porges, 2003, 2011; Rogers, 1986): Dr Porges's (1994) Polyvagal Theory posits that when mammals use the social engagement system to make emotional and psychological contact and resolve things, then the body's regulation moves towards trust and connections. Only then, according to Porges and the SE™ approach, is the movement out of trauma possible. It may be argued that this would make profound sense to Rogers if he were alive today as his methodology was very much premised on using mirroring to develop empathic understanding, trust and connection with the client.

According to Rogers (1986), congruence is the most important principle in that it implies that the therapist is genuine, open, transparent and authentic during her interactions with the client. This stance ensures that the therapist is accessible to the client. Unconditional positive regard refers to the therapist's deep and genuine caring for the client and an underlying belief in the client's ability to heal and find their way towards their answers. The therapist may not approve of some of the client's actions but the therapist indicates unconditional acceptance of the client. Finally, according to Rogers, accurate empathic understanding involves the therapist's ability to understand sensitively and accurately (in a bounded way) the client's experience and feelings in the here-and-now. Empathic understanding implies that the therapist will sense the client's feelings as if they were his or her own without becoming lost in those feelings or judging them.

However, other approaches – such as Gestalt and psychodynamic therapies – which explored and highlighted significant moments and memories were important. Introspection around Sam's feelings about himself, about family members, about self-perceptions in childhood and how these informed his present functioning were important areas to pursue. Family systems theory was a further critical influence on this therapist and an important dynamic in the case of Sam. It is reflective of the bioecological model (Bronfenbrenner, 2005, 2007) which forms an ontological tenet of this study. Family systems theory (Bowen, 1978) presents that individuals cannot be understood in separation from one another, but rather as a part of their family, as the

family is the most fundamental formative emotional influence. The family, of course, is always relevant to the individual's functioning but it is often an even more significant factor with children and adolescents as they are still very much directly dependent on their family members which increases their susceptibility to systemic dynamics.

Neuroscientific research and theories confirm that relationships underlie brain connections. In terms of the attachment paradigm, Van der Kolk (2005a) explains how attachment patterns formed early on in the child's life influence the quality of emotional processing and memories throughout life. The characteristics of the child's caregiver and relational context impact the child and become internalised affecting neural development and the developing brain. Children begin to calibrate their autonomic arousal in response to their caregivers' reactions to them; this informs their construction of what Bowlby (1969) called "internal working models". Stressful experiences, and especially trauma, affect the development of the child's brain especially as the immature brain is still developing and is highly dependent upon information from the environment to do so. Anderson (2016:239) states that: "Events that occur during critical periods lay a foundation and later influences of the environment during a sensitive period shape the final trajectory." The paradigm of "critical periods" occurs during active brain growth where the increase of neural infrastructure (neurons, glia) influences and structures development and "locks it in" (Hanover, Huang, Tonegawa & Stryker, 1999, cited in Anderson, 2016). Critical periods are necessary for the foundation of the brain structures; however, they also create a time of heightened sensitivity to the influence of environmental impact.

The adolescent brain is well known for the increased expression of dopamine in the prefrontal cortex (PFC) which is instrumental in increasing motivational salience which heightens behaviours such as elevated novelty preferences and impulsivity (Brenhouse & Anderson, 2008 cited in Anderson, 2016). Furthermore, associations formed by the adolescent between a behaviour and the environment are more difficult to change compared with other maturational stages. (Baker et al., 2016). Baker et al. (2016) report on how difficult it is to reduce or eliminate the learned response to fear-related stimuli during adolescence. This increases the possibility that associations which occur before or during adolescence become integrated into the individual's

neurophysiological foundation. Following on from Andersen's (2016) assertion that early life stressors impact the development of the brain structures, it is posited then that, the earlier the neurophysiological regulatory process (which is a core process in SE™ and other somatic techniques) is integrated into functioning, the more significant the impact on neuronal connections will be for the child and adolescent.

Cognitive theory was viewed as the final significant treatment methodology which became extremely valuable in assisting the client to understand and resist the obsessions and compulsions characteristic of OCD. Cognitive theories posit that individuals with OCD misjudge intrusive thoughts based on flawed beliefs, such as magnified personal responsibility for harm, the over-estimation of the power of thoughts, and the heightened appraisal of threat (Rachman, 2002; Salkovskis, 1985). According to McLean, Whittal, Thordarson, Taylor, Söchting, Koch, Paterson and Anderson (2001) there are six types of faulty appraisals: (a) over-valuing of thoughts, (b) over-estimation of danger, (c) inflation of responsibility, (d) over-estimation of the consequences of danger, (e) over-estimation of the consequences of responsibility, and (f) need for certainty, control and perfectionism.

These misappraisals lead to ineffective strategies to manage the intrusions and have a direct relationship to compulsive behaviours. Salkovskis (1985:571) observed that "obsessional thinking is the archetypal example of a cognitive disorder in the neuroses", and went on to propose that these thoughts "revolve around personal responsibility, the possibility that if things go wrong it might well be the person's own fault" (Salkovskis, 1985:574). He went on to argue that a major factor in OCD is the inflated belief "in the responsibility of being the cause of serious harm to others or self" (Salkovskis, 1985:575). A second factor in OCD is that the person "interprets the occurrence of intrusive thoughts, images, impulses and doubts" as revealing and threatening (Salkovskis 1985; Salkovskis, Shafran, Rachman, Freeston, 1999). This combination of OCD-related beliefs and maladaptive appraisals lies at the root of the disorder and gives OCD its distinctive qualities (Rachman, 2002).

The implications for therapy are that it is critical to access a range of insights, theories and methodologies when working with the adolescent client with OCD. The ability to

identify factors within family systems, self-construct factors and cognitive thinking patterns is extremely valuable to gaining clarity on the issues arising with trauma-based OCD in the adolescent client.

6.3.3 Understanding of the central role of lack of emotional safety in core childhood relationships in contributing to trauma-based OCD

It is important to note that trauma does not always mean that a person experiences extreme traumas like those identified in the DSM-5 (such as actual or threatened death, serious injury or sexual violence). There are multiple factors which contribute to a type of chronic trauma in childhood: research shows that even failure to establish secure attachment bonds, loss of a consistent caregiver and chronically mis-attuned caregiving can result in significant internal dysregulation. Research-based insight into the disorder indicates that childhood-onset OCD is differentiated from adult-onset OCD by heavier familial weighting, higher frequencies of neurological symptoms and tic-like symptoms (Presta et al., 2003). These authors cite research which posits that childhood-onset OCD is often preceded by other anxiety disorders (such as separation anxiety disorder, panic disorder with agoraphobia, social phobia), mood disorders (bipolar and unipolar depression), eating disorders (anorexia), psychotic disorders (usually schizophreniform or atypical psychoses), or attention-deficit/hyperactivity disorder (AD/HD). Furthermore, Doron, Moulding, Kyrios and Nedeljkovic (2008) posit that susceptibility to OCD could be fostered through specific attachment, self and worldview structures. Individuals who develop OCD may possess “sensitive” domains of self, characterised as subjectively important domains in which the individual feels incapable or inept (Doron et al., 2008). With respect to cognitions, sensitivity of self was most strongly related to beliefs regarding the overestimation of threat/inflated sense of responsibility. According to Salkovskis, et al. (1999), anxiety and preoccupation with thoughts related to negative self-concept stem from sensitivity to these self-domains and, therefore, it is valuable for the therapist to identify these sensitivities and probe into the reasons underlying them. Understanding these would assist the therapist in challenging the assumptions underlying perceptions of incompetence in such domains, the excessive importance attributed to them, and may increase perceptions of competence. Such probing will also allow the patient to

recognise the relationship between their symptoms and their perceptions of self. Furthermore, studies cited by these authors indicate that OCD is likely to significantly impair the affected child's social functioning.

Sasson et al. (2005) present that OCD is robustly correlated with increased responsibility, significant losses and the number of stressful events during the year preceding onset. Khanna et al. (1988) found that the increased number of stressors appeared to be less controllable compared with events occurring in the control group. Borges et al. (2011) found that adolescents who had experienced more undesirable life events (as measured by the Coddington Life Events Scale for Adolescents), were at higher risk for developing OCD later in life. Mathews et al. (2008:748) state that: "Although physical or sexual trauma may contribute, emotional trauma (abuse or neglect) is likely to be the most relevant factor in the development of clinically significant OCS."

Not surprisingly then, a significant thrust of research about OCD and those who acquire it relates to self-related constructs. Kyrios (2007, cited in Nikodijevic et al., (2015) suggested that a fragile view of the self increases the likelihood that intrusive thoughts are interpreted as threatening which, in turn, heightens symptoms. García-Soriano and colleagues (2012, cited in Nikodijevic, et al., 2015) highlighted the involvement of self-worth factors in OCD.

Childhood and adolescence are defined by significant neurochemical, structural and functional changes across neurology and physiology. Anderson (2016:239) succinctly describes this: "Events that occur during critical periods lay a foundation and later influences of the environment during a sensitive period shape the final trajectory." The paradigm of critical periods occurs in concert with active brain growth where the increase of neural infrastructure (neurons, glia) shapes and guides development and "locks it in" (Hanover et al., 1999, cited in Anderson, 2016). Critical periods are vital for the foundation of the brain and are also when the brain is uniquely sensitive to environmental impacts.

The adolescent brain is well known for the increased expression of dopamine in the prelimbic PFC which is instrumental in increasing motivational salience which

heightens behaviours such as elevated novelty preferences and impulsivity (Brenhouse & Anderson, 2008 cited in Anderson, 2016). What is also pertinent to this study is that – using the salience factor – associations formed by the adolescent between a behaviour and the environment are more difficult to change compared with other maturational stages (Baker et al., 2016). Baker et al. (2016) report on how extinction learning of fear-related stimuli is uniquely impaired during adolescence increasing the possibility that associations which occur before or during adolescence will become an integral part of the individual's foundation. Changes in brain structure following early life stress have been linked to different vulnerable periods in the brain, where ages of growth for a region are most vulnerable if the abuse occurs during that time (Andersen, 2016).

There is a plethora of research on brain development to show that the experience of trauma by the child and adolescent is highly pertinent to the developing brain. Information from the field of developmental neuroscience suggest that the CNS is more “plastic” early in development and may be more deeply affected by experiences during these periods and early stressors appear to induce long-term changes in various neurotransmitter systems (Nemeroff, 2004). Furthermore, findings in adult survivors of childhood abuse support the hypothesis that “individuals exposed to childhood trauma are increasingly vulnerable even in response to mildly stressful events in adulthood, which increases their risk for development of mood and anxiety disorders” (Nemeroff, 2004:26).

The position of this study is that, in a sub-group of people who experience OCD, the experience is characterised by recurrent and disturbing thoughts because of the preceding experience of trauma. Studies have also identified a higher rate of dissociation in people with OCD (Selvi et al., 2012) which is extremely interesting in light of the research linked to the fight, flight and freeze response above and the element of dissociation involved in the latter defence mechanism. Selvi et al. (2012:56) go on to say that “(o)ne study revealed that tendency to dissociation in OCD patients is germane to childhood traumatic experiences”. A number of studies report that, in general, there are extreme fear-based beliefs in response to specific (often seemingly innocuous) stimuli or thoughts; rituals or compulsions are used in order to attempt to

banish the thoughts. According to Friedman (2007), who cites Barlow (1988), anxiety is rooted in fear and its manifestation is the preparation to flee. Rachman (1997:793) presents that “obsessions are caused by catastrophic misinterpretations of the significance of one’s intrusive thoughts”. Furthermore, while the content of typical and atypical or obsessional thoughts are quite similar, the intensity differs because of the meaning attached to obsessional thoughts – “obsessions last longer, are more intense, more persistent, cause more distress, and create more lasting impact on the individual” (Rachman, 1997:793). Rachman (2002) further argues that the more stressful the experiences, the greater the dysregulation or distress the individual will feel, and the greater the frequency of intrusive/obsessional thoughts, (Rachman, 2002).

Therefore, it is valuable to truly appreciate the role that a sense of lack of psychological, emotional and neurophysiological safety plays on a deep foundational level. Where possible, it can be valuable to work with the family unit or individual caregivers (as with Sam’s mother) to work with integrating calmer communication and containment to support therapeutic goals. Where attachment trauma is indicated it would be very important to work with the family caregivers to repair attachment bonds as much as possible through education and support.

6.3.4 The therapist focuses on the role of self-regulation and finding an internal sense of safety in order to assist the client to shift the fear

At the heart of the SE™ methodology is the concept of self-regulation, the ability to “handle our own states of arousal and our difficult emotions thus providing the basis for the balance between authentic autonomy and healthy social engagement” (Levine, 2010:13). As presented by Mathews, Kaur and Stein (2008) chronic stress or trauma which induces fearful states can also be linked to emotional abuse or neglect in childhood and not only significant life crises (like being involved in or witnessing a life-threatening incident as identified in the DSM-5). Parenting styles (Barrett et al., 2002) and personality factors (Mathews et al., 2008) have also been found to play a role in the development of OCD in children. A defining characteristic of OCD is the excessive

mental and emotional pre-occupations which dominate a significant proportion of the person's mental "time" or focus and are driven by fear or distress (APA, 2013:235).

Psychological stress and trauma have an intricate interrelationship with physical systems and neurobiological processes. It can be said that, "emotions are cognitive states resulting from the integration of bodily perceptions with propositional attitudes" (Barlassina & Newen, 2014:638). Payne et al. (2015:1) defines chronic stress as the "inability of the complex dynamical system of the ANS to recover to normal functionality". It has been established in Chapter 2 that experiences of extreme stress or trauma can result in nervous system arousal which affects both the body and emotional states (Borges et al., 2011). The position of this study is that, in a sub-group of people who experience OCD, the experience is characterised by recurrent and disturbing thoughts because of the preceding experience of trauma.

According to Kozłowska et al. (2015:263), the defence response to threat in the animal model includes "arousal, freeze, flight or fight, tonic immobility, collapsed immobility, and quiescent immobility". These are mediated by neural circuits involving the extended amygdala, hypothalamus, periaqueductal grey, ventral pontine tegmentum, ventral and dorsal medulla, and spinal cord. However, the human model is complicated by the subjective representations which imbue experiences with meaning. These, like real external threats, have the capacity to activate the body's defence systems. Fear states can therefore be induced by combinations of internal and external triggers, some of which will be accessible to conscious processing, and some not.

The value of somatic or body-based psychotherapy, and mindfulness in general, is increasing the awareness of one's own neurophysiological reactions to triggers and the ability to work with those so that one can return to a state of calm when there is no danger in the present moment. It is something we generally do without thinking but when heightened or chronic neurophysical arousal leads to ongoing dysregulation, experiences of fear and psychopathology, then awareness is key to mental health. Based on clinical practice in the field of PTSD and a significant interest in mammalian physiology, Levine (2010) deduced that – unlike other mammals in the wild – we, as socialised human animals, override our biological strategies for release after trauma.

This results in a neurophysiological suppression and retention of trauma in the body. A central tenet of SE™ is the therapist observing the client's neurophysiology – heart-rate acceleration (generally when the client starts to move towards more difficult material), breathing (high in the chest during sympathetic arousal, very slow or shallow during the freeze response), skin temperature (often visible through flushing or paleness), diameter of the pupils (dilation and constriction) , the speed of speech and quality of voice and frozenness in the body.

A central goal of SE™ is to assist the client to release pent up chronic stress or immobility in order to regain equilibrium. As with Sam, there was a heightened response to shouting or loud noises where his body would actually go into freeze. Sam also remembered going into freeze as a younger boy. There were also frequent shifts into a type of frozenness when Sam felt intense shame and inadequacy. Then there was the other extreme of 'fight' when Sam experienced anger against his father and his peers. When the client is sympathetically aroused, the therapist guides the client to follow those sensations so that they peak and then diminish, creating the greater capacity for self-regulation.

A critical pathway for supporting the attainment of regulation in the client is to establish an external and internal environment of "relative safety" with the client. Levine (2010) emphasised that the most important thing for a therapist to feel, is safety in her own body. Then, the therapist utilises the social engagement system in order to support the client to feel safe in the therapeutic environment. This requires congruency, reflection and containment on the part of the therapist. When the client is ready, the therapist can begin to guide him or her into developing awareness of resources internally. It is sometimes necessary to use pendulation with an external object to start with, to illustrate the movement between calm embodiment before moving towards arousal. Clearly, the pace is set by the client and the therapist's attunement to the verbal and non-verbal cues from the client. This should proceed at a sensitive pace as neurophysiological research has established that enormous amounts of neurophysiological and chemical processes are involved in the person's response to fear (Twardosz & Lutzker, 2010; Van der Kolk, 2014).

6.3.5 While a sense of safety in the nervous system is being established, the therapist can assist the client to begin exploring the dysregulating layers of underlying trauma

Chronic stress and trauma have a close interrelationship with physical systems and neurobiological processes and research has established that there is a bidirectional relationship between the body and the “mind” (Scaer, 2005; Van der Kolk, 2014). Levine (2010) presents that trauma is the result of the fight/flight or freeze circuits being initiated and not being completed. *Dysregulation* is the state of the body when traumatic energy is unprocessed, with residual activation keeping a person in a state of reactivity and readiness. The one extreme of this is the “stuck on” position and the other is the “stuck off” position. According to Levine (Yalom & Yalom, 2010), the former is when the sympathetic nervous system is activated, when the person feels that something bad can happen at any moment and the psycho-physiological reactions can manifest as “anxiety, panic, mania, hypervigilance, sleeplessness, dissociation, attention deficit, OCD, emotional flooding, chronic pain, hostility/rage etc.”. Being “stuck off” is when the parasympathetic branch of the autonomic nervous system is dominant showing up as “depression, flat affect, lethargy, exhaustion, low impulse/motivation, chronic fatigue, dissociation, many of the complex syndromes, low blood pressure”.

According to Scaer (2001), when the freeze response is elicited, the energy-conserving strategies mediated by the parasympathetic nervous system “truncates” (Scaer, 2001) and dominates the existing state of high sympathetic activation which initiated the flight action; as both the sympathetic nervous system and the parasympathetic nervous system (the vagal “brake”) are now activated, this leaves the organism in a state of repressed arousal. Levine (2010) explains that, as the person or animal goes into immobilisation, so they come out in the same way, often using rage and counterattack as they emerge. He clarifies that these reactions are *time-sensitive and* need to run their course, as the massive chemical energy that was initiated for fight/flight invades the body and then needs to dissipate through discharge.

Dr Levine and Dr Raja Selvam (a senior trainer of SE™), discuss the concept of Global High Intensity Activation (GHIA) whereby chronic stress or prolonged and intense trauma results in a physiology that is “stuck” in the GHIA pattern (Selvam, 2003–2004). As described in the figure below, this results in high neurophysiological arousal with very little required for activation. This creates an extremely minimal capacity in the body for activation; in fact, the neurophysiology is almost always activated and on high alert.

It is proposed that this is what the arousal levels in a person with OCD would look like. The goal then, as with Sam, is to decrease the overall level of activation and prolong the capacity of the person to manage dysregulation. If we look at point 1 in Figure 6.1, the person stuck in the GHIA pattern, only has a small range to swing from the resting baseline to the highest point of arousal. So, even when these clients are relaxed, they are activated or almost activated. Because of the high level of stress this system is under, they often do all kinds of things to compensate for it and use all kinds of different strategies to cope with it. It is proposed that one of these strategies is that of the obsessions and compulsions characteristic of OCD.

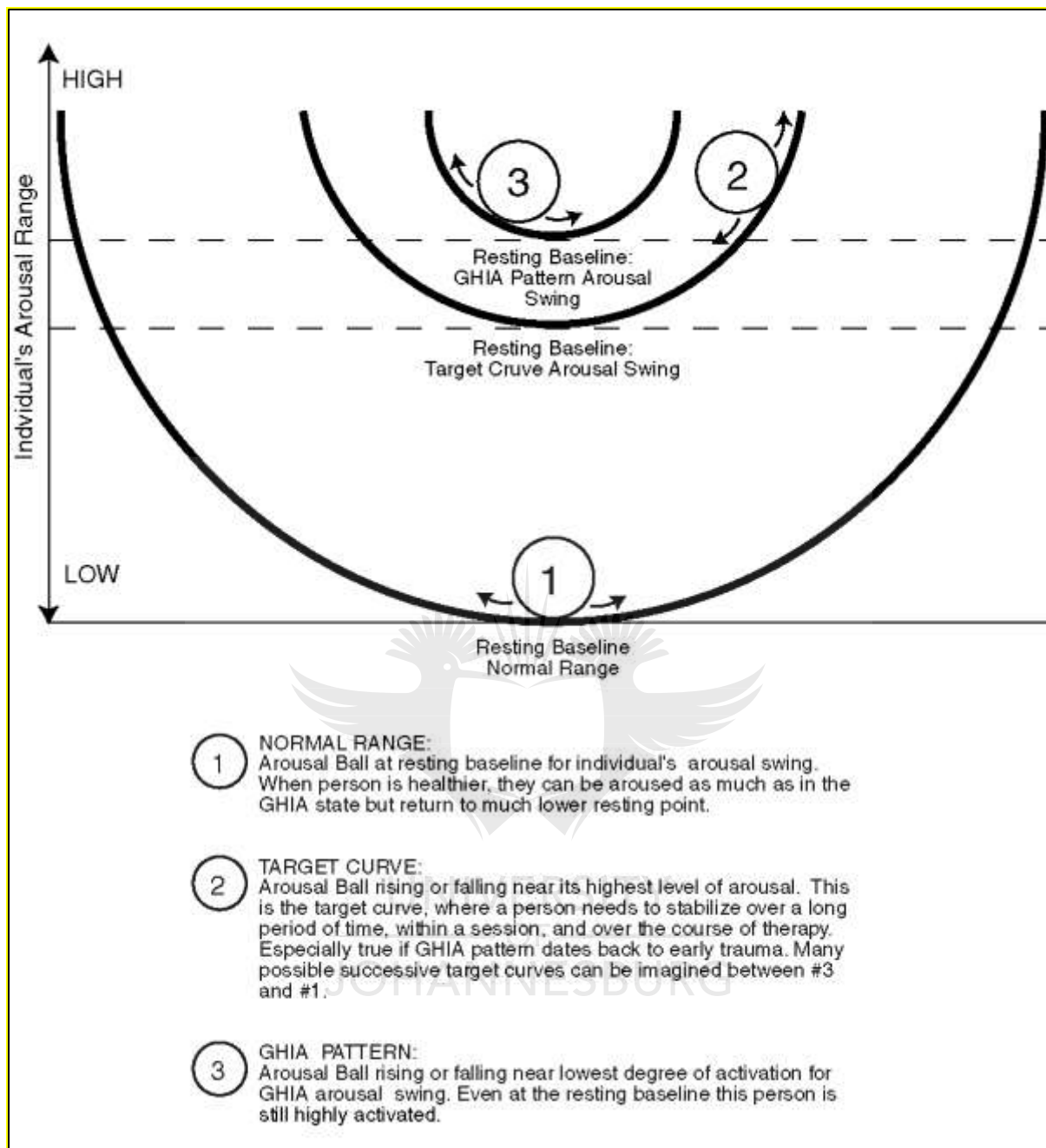


Figure 6.2: Ranges of arousal (Selvam, 2003–2004)

As recommended by Levine and Selvam, the way to work with these clients is to use SE™ and sensory awareness to open the cognisance of sensing the body a little bit. Then the therapist can guide the client to track the underlying arousal. Concurrently, the therapist works at expanding the awareness of the different phases of the body ensuring pendulation between safe and unsafe, neutral and fearful sensations. In this way, the client begins to gain a greater capacity to manage the dysregulation and

thereby begins to lower the activation and increase the amount of energy in the body without activation.

SE™ facilitates the gradual release of traumatic energy stored in the autonomic nervous system while creating corrective interoceptive experiences that physically counterweigh those of immobility and helplessness. In this way, attention to physical activation and release in order to return to equilibrium can support the resolution of symptoms resulting from traumatic stress (Levine, 2010). SE™ sessions involve the introduction of small amounts of traumatic material and the observation of a client's physiological responses such as shallow breathing or a small change in posture. The therapist guides the client to identify and assess somatic sensations that may be imperceptible to the client's conscious awareness, such as feelings of heaviness, tightness or dizziness. Practitioners proceed cautiously utilising *titration* (miniscule or slow increases in action of trauma) and *pendulation* (moving between a physiological and internal sense of safety to the sense of autonomic arousal and stress).

Levine (2010) developed the methodology of titration which involves the release of minute amounts of trauma until the person is able to regulate themselves for longer periods of time without destabilising. A critical element to improving the client's ability to self-regulate is the process of pendulating between the sensations associated with trauma and those that are a source of strength and comfort. The SE™ practitioner will help the client find sensations of safety, whether that be a place in the body that is not activated by the trauma, or an image to retreat to in one's mind. The client can learn both to establish a "place of safety" so to speak within the body and to recalibrate the neuroreceptors within the entire body in order to respond appropriately to stimuli.

In practice, I have found that clients with anxiety, trauma and OCD seem to carry a sense of "dread" around with them in their bodies without being consciously aware of it. This is often evident when you ask them to relax their shoulders and their shoulders visibly drop and they straighten their necks; this is very often accompanied by a deep sigh. When psychopathology develops, this sense of fear or dread creates intense physiological anxiety and becomes overgeneralised to most, if not all, situations. I encourage the client to acknowledge that in this innocuous place (such as sitting at work or taking a shower) there is generally no real threat at this moment; I encourage

them to become aware of their current “relative safety” and to release the anxiety or fear. This often goes hand-in-hand with changing self-constructs and allowing themselves to acknowledge how far they have come or that they survived the trauma. Levine (2010) indicates that the fear centre of the brain, the amygdala, cannot distinguish between past and present:

When the distress is generated internally (by muscles and viscera), one experiences an obsessive pressure to locate the source of threat or (when that's not possible) to manufacture one as a way of explaining to oneself that there is an identifiable source of threat (Levine, 2010:100).

I encourage the client to identify things in the counselling space that they might not have noticed before (widening of the peripheral vision) or to engage in a task such as looking at an object from different points of view. They can then acknowledge that now they are not threatened and can relax their body, breathe and engage the present. By showing them how to engage more and more in a calmer way, I aim to stimulate a neurophysiological and neuroceptive sense of what safe and comfortable feels like. I can then take them to a place in their body and work on building that sense. Sometimes, as when Sam entered therapy feeling like he had PTSD in response to his dad's shouting or after a big fight during a soccer match, it is valuable to assist the client to identify the sensation that he is feeling in his body, and eventually to move into a discussion of the emotions. There are also times when it is difficult for the client to go towards a sense of fear or shame and the dynamic tools of pendulation and titration become valuable tools for edging towards those. Eventually, Sam was pushing himself to stay regulated even when the obsessions were “telling” him to do a compulsive action.

As mentioned earlier, clients are encouraged to develop resources which are cognitive and interoceptive forms of assistance that help the ANS to self-regulate. Clients have frequently reported that they have been able to remind themselves or bring to conscious awareness that they are emotionally and physically safe in many settings and to release the fear and anxiety they are unconsciously carrying in their bodies (shoulders, neck, legs, etc.) through breathing exercises and returning to the safe sense in a part of their body.

6.3.6 The therapist can utilise the psycho-education around cognitive distortions and self-constructs in order to build the internal resources of the client

Many people with OCD have dysfunctional beliefs linked to the overestimation of threat (APA, 2013:238) and fear of something impending and dreadful happening. While the central tenet of this thesis is that OCD develops from extreme anxiety in response to a sense of threat or lack of safety in the child or adolescent's immediate environment, there is overwhelming evidence to indicate that cognitive appraisals are involved. Cognitive appraisals may already be distorted in individuals who go on to develop OCD. Rachman (2002) and Salkovski (1985) refer to those people who have a predisposition to an extreme variant of normal "unwanted intrusive thoughts" (UIT) as "as vulnerable individuals". Barrett et al. (2002) identify a direct link between obsessive-compulsive symptoms and dysfunctional parenting styles related to emotional abuse such as over-control, highly expressed emotion and emotional rejection. It is probable that such individuals have a predisposition in terms of feeling overly responsible for their environment, to prevent unwanted events from occurring (Rachman, 1977). Linked to this is an inflated sense of responsibility to avert this occurrence or phenomenon. Mathews et al. (2008) identify an indirect related factor with the personality facet of conscientiousness.

As presented in more detail in section 2.2.2, this may be particularly relevant to children if one takes into consideration Piaget's (1950) delineation of cognitive development and Erikson's (1997) theory of psychosocial stages of the child. This understanding of cognitive and emotional development ties in with the argument presented by Van der Kolk (2005) for a diagnosis category of "developmental trauma" which identifies children as being most at risk for complex trauma: "trauma has its most pervasive impact during the first decade of life and becomes more circumscribed, i.e. more like 'pure' PTSD, with age" (Van der Kolk, 2005:8). Sasson et al. (2005) present that OCD is strongly correlated with a number of factors including a sense of increased responsibility, significant losses and the number of stressful events during the year preceding onset. Khanna et al. (1988) found that the increased number of stressors

appeared to be less controllable compared with events occurring in a control group in their study.

A core tenet of CBT models is that people who are susceptible to OCD are more likely to misappraise unwanted thoughts that have personal meaning or significance (Salkovskis, 1985). Through this notion of “personal significance” it is acknowledged that the individual’s self-view is a key factor of how UITs are evaluated. Thus OCD-vulnerable individuals are maybe more likely to misinterpret as personally meaningful a UIT that is contrary to, or threatens, cherished standards, values or ideals involved in self-evaluation (Rachman, 1998; Salkovskis, 1985; Salkovskis et al., 1999).

Therefore, it is critical to work with client’s cognitive distortions during therapy especially in concert with the process of neuro-physical regulation. The cognitive distortions, including a sense of shame and blame and self-rejection, can create a block to the experience of self-regulation and self-acceptance and, therefore, working towards what one could call “normalisation of cognitive appraisal” is critical in this type of therapy. Near the beginning of therapy with Sam, the therapist guided him to become aware of his harsh inner critic: he had a heightened awareness of his weaknesses and flaws with almost no recognition of his uniqueness, individuality, strengths, assets or resources. It was important to highlight how unfair or harsh his own critical voice was and how lenient or accepting he was of others’ flaws. He had also set up an unrealistic expectation of needing to be better than “average” in everything he did (as a means of building his self-esteem) and he was constantly disappointed with himself for not reaching this unrealistic level. This dynamic also related to intense anxiety and his motivating himself to improve through fear.

As explored thoroughly in section 5.5 shame and fear were overcoupled in Sam’s OCD. For example, he stated that – while needing to over-colour something in Mathematics as part of his compulsions – he was “scared that something (bad) will happen (if I didn’t colour in)”; Sam stated that he “felt sad, felt I let down ... someone” after a compulsive action. There was a predominant underlying message of shame and inadequacy in his behaviour and ideas. Through assisting Sam to identify sensations of neutrality or comfort in his body, therapy was gradually able to assist

him to establish more and more regulation, and the more he experienced a calm and regulated nervous system, the more he realised this could be his new “norm”. As an intelligent, logical teen he could come to understand that he didn’t have to feel overly responsible for his mother’s choices and father’s anger and depression which assisted in further allowing him to find “islands of relative safety” in his neurophysiology. In addition, his natural interest in breath-work, exercise and meditation further aided in enhancing this positive sensation.

This study presents that, in distinction to the more conventional usage of SE™ for the release of more contained traumas often gained during war, attack/abuse and natural disasters, cognitive distortions often begin to be formed from the pre-verbal stage and become formulated as unconscious thoughts. This makes sense in light of Piaget’s (1950) delineation of the child’s cognitive development process: the second stage of development – the pre-operational stage, lasting from about age two to seven – is largely characterised by egocentrism in that the child’s thoughts and communications are mostly self-referencing. This type of thinking may well underlie the sense of having an excessive responsibility as explored by Rachman (1997) as it is well known in child psychology that children are prone to blame themselves for parental conflict or divorce or to feel extremely responsible to fix ruptures in psychosocial relationships which are actually not their fault nor under their control.

As presented in Figure 6.1, the therapist needed to bring an awareness of the “decision” or the “belief” that the client has integrated and assumed somewhere along the line in order to shift the appraisals and thinking patterns of individuals with OCD. As with Sam, he entered therapy with no insight into how his cognitive distortions were abetting his ongoing sense of being inadequate, vulnerable and threatened by his environment. However, for people with trauma-based OCD, this process is intricately involved with physiological arousal and so there is a need to work with both dynamics. For as long as Sam felt (unconsciously) responsible for his mother’s burden, powerless in the face of his father’s anger, rage and fear and inadequate in the eyes of his older siblings and his father, so he would continue to feel vulnerable and threatened and need to “shore up” his world through his OCD beliefs and actions.

6.4 CONCLUSION

This research is based on the evidence-based practice paradigm. There is a compelling evidence-based practice (EBP) momentum which acknowledges the need to explore individual experiences and advocates for the need for such studies to improve treatment outcomes by informing clinical practice with relevant research (APA, 2006). In assuming a naturalist methodology as in this case study, I utilised data gathered through interviews, therapy sessions and reflective sessions. Pertinent to this study is the focus on research as action (Terre Blanche et al., 2006:10) as it is essentially founded on the evidence-based practice position which posits that there is value in psychological research in identifying how the individual perceives and experiences something (e.g. a treatment methodology).

I used the IPA method discussed by Saldana (2009) and presented in Chapter 4. I created concise phrases for the main ideas related to the study at a higher level of abstraction (such as a psychological conceptualisation); I then identified superordinate conceptual labels for a number of themes; finally, I identified themes, in relation to the objectives of the study. The themes were used to identify implications for practitioners working with adolescents with OCD where preceding trauma or stressors are indicated. Themes explored the value of the therapist being able to identify the multiple complex factors interacting with the client and being able to utilise a range of methodologies to address these. Other themes included a deep cognisance of the dysregulating effects of trauma on the neurophysiology of the adolescent as well addressing and creating a sense of safety or “islands of (relative) safety” with the client before beginning to delve into dysregulating trauma.

CHAPTER 7

SUMMARY

7.1 INTRODUCTION

As presented in depth in Chapter 4, a phenomenological study presents the essence of the client's lived experience. The case study provides an intensive, detailed method of enquiry focusing on a real-life single case using a variety of sources of evidence (Hewitt-Taylor 2002). It is, therefore, an in-depth account and exploration of the bounded system (Okeke & Van Wyk, 2015; Merriam & Tisdall, 2016), that is, of an adolescent who has experienced preceding stress or trauma and subsequently developed OCD. The case study is an instructive method, given that its purpose is to provide a critical analysis of practice and is appropriate when the boundaries between phenomenon (OCD in adolescence) and context (role of trauma, options of treatment approaches) may not be clear (Corcoran, Walker & Wals, 2004). Yin (2014:15) elucidates that a case study is empirical research of a phenomenon in a real-life context whereas an experiment isolates the former from the latter as much as possible and controls for the influence of only a limited number of variables (Yin, 2014:16).

A defining factor of the phenomenological approach is that reality is constructed in the mind of the individual (Guba & Lincoln, 1989) and, therefore, it is this complex phenomenon which one attempts to capture and present in such a study. The bioecological model (Bronfenbrenner, 2005) informed my fundamental stance and I explored the effects of the proximal and distal factors in the client's life with a particular emphasis on the family unit and relational dynamics as these were presented by the client as significant foci. This study was further influenced by the social constructivist approach (Gergen, 1985, 2009). The latter posits that these bioecological systems are influenced and underpinned by a range of ideological "discourses" and beliefs (frequently, implicit and unexpressed) that underly these systems in the first place.

In light of these lenses through which I approached this study, it is acknowledged that I am influenced by my own bioecological systems, by the discourses which I have

been exposed to at university and the ideological framework which I have integrated. There is also the inherent individual subjectivity of my construction of interpretations from the therapy sessions based on my specialisation in Somatic Experiencing™. In line with the phenomenological interpretive approach, with its emphasis on the subjective construction of knowledge, I viewed myself, not an objective spectator, but as an active participant in the creation and co-creation of knowledge with the client. I brought my own worldview and psycho-theoretical stance to the sessions and to this study. My clinical experiences with OCD indicated a strong link to relational trauma, engendering a deep interest to explore the inter-relationship of trauma or chronic stress and OCD and the treatment options available. Perhaps it can be hypothesised that this is the very nature of theoretical development – it is based on where the subjective mind of the researcher is and therefore as myriad influences develop so do the insights we gain through studies by individuals.

The questions which create the motivation for this study, and how I answered them are explained here:

- How does Somatic Experiencing™ assist in alleviating or resolving the experience and effects of trauma as experienced by the child or adolescent?

It is clear from this study that the somatic-based approach of SE™ which was used to address the neurophysiological dynamics of trauma was useful for the client. The client evidenced characteristics of trauma including sweaty palms, racing heart, autonomic arousal when triggered by his father's outbursts. In his layperson terms, he described them as "PTSD symptoms". He became aware of how dysregulated his neurophysiology was through therapy and the use of SE™: therapy alerted him to the sensations in his body, to his hyper-arousal, dysregulation and to the emotional and cognitive thinking happening concurrently. This can be seen in detail in section 5.5 above.

- What was the personal experience by the participant of SE™ as a treatment methodology for OCD?

The client felt that the therapy had assisted significantly in supporting him to gain a foothold in moving away from the obsessions and compulsions which had ruled his

functioning. Gaining a sense of internal safety, exploring the effects of physiological triggers and how they affected his body and thinking, being able to make a choice to view his present as separate from his past and to identify the overcoupling of his neurophysiology, allowed him to begin to manage his OCD and, eventually, to control the obsessions and compulsions to a very large degree.

- Finally, the recommendations for therapists who have clients who present with OCD are discussed in detail in section 7.3.

It is viewed as critical for the therapist to acknowledge and understand that there are, in fact, multiple complex factors underlying trauma-based OCD in adolescents. Shame, guilt, unexpressed anger, self-constructs, fear are just a few. Following on from this awareness, once the complex issues are identified, then different therapeutic techniques can be applied to the factors in a strategic way.

It is viewed as necessary for the therapist to identify and understand the central role of lack of emotional safety in core childhood relationships in contributing to trauma-based OCD. This is because, when neurophysiology is overcoupled with environmental and familial triggers, it is necessary to separate out the factors and to assist the client bring an awareness to these. Without that awareness and understanding, the dysregulation cannot be fully understood.

Only then, it is presented in this study, can the therapist assist the client to focus on the role of self-regulation and the value of finding an internal sense of safety in order to assist the client to shift the fear. With this anchor in place, it is then vital to assist the client to begin exploring the dysregulating layers of primal trauma in order to come to terms with them and regulate them.

Finally, psycho-education around cognitive distortions and the effects of these on self-constructs and self-esteem is necessary in order to assist the client to be aware of cognitive thinking distortions or traps.

7.2 THEMATIC ANALYSIS RESULTING FROM THERAPY SESSIONS

The descriptions presented in Chapter 5 provide the reader with a detailed understanding of what the client brought to therapy, what happened during the therapy sessions, how the phenomenon of OCD was experienced by the client and it presents the constructs brought to bear by the therapist. Further delineated in Chapter 5, were the various themes extracted from the data. The analysis of therapy and extraction of themes provide a plethora of implications for both practice and future research (Heppner & Heppner, 2004). Themes were extracted from the current study using Interpretive Phenomenological Analysis (IPA). In this analytic approach, interpretation follows the process of deducing meaning by drawing inferences or by judging the match between the information (i.e. repeated words, ideas and concepts discussed by the client) and some pattern. These were also informed by insights gained from supervision sessions, theory and research, and the therapist's own psycho-development during the process. For example, the identification of shame and the link to self esteem became apparent as the client described experiences and emotions experienced in childhood and primary school. Given my psychological training and interest in the bioecological influences surrounding the client, these naturally became a focus of the therapy sessions. Further influences included the client's changing insight into his relationship with his father, siblings and peers and his own exploration of these ideas through self-insight, reading and meditation.

7.3 RECOMMENDATIONS FOR PRACTICE

7.3.1 Identifying the multiple psychological factors underlying trauma-based OCD

During this study, it became apparent that there were multiple psychological factors underlying the trauma-based OCD experienced by this adolescent and it was vital for the therapist to explore these. Historically, the predominant CBT or ERP approach in the treatment of pathology (including OCD) has been to jettison insight-oriented therapies given the implication of unconscious processes (Grosse Holtforth, Castonguay, Boswell, Angtuaco, Kakouros & Borkovec, 2007). In the case of Sam,

presented in this study, it was identified that not only were fear and anxiety critical underlying factors, but also that shame, guilt, a sense of (over-) responsibility and conflicted feelings towards a parent were all significant underlying factors.

Recommendations for practice include that the therapist must gain careful insight over time not only into the client's bioecological systems and worldview, but also into the client's psycho-physiological profile. This entails gathering information by observing the client's physiology and reactions to communication and information. The client might exhibit subtle ongoing and shifting clues such as the colouring in the cheeks and face, hand movement or hand position, body posture, wiggling of leg, etc. These guide the therapist to identify possible underlying psycho-emotional dynamics and coupling factors. For example, some of the complex and shifting symptoms viewed by the therapist when Sam entered therapy was the range of colour in his face (over the duration of sessions Sam presented with colouring which ranged from flushed to calm), a tendency to slump in the seat or to sit forward with his elbows resting on his knees and holding his face, ongoing jiggling of his right or left leg and difficulty maintaining eye contact. This informed the therapist's understanding of the meaning which Sam expressed in his narrative and experiences. Although his face cannot be shown here because of confidentiality, there was a noticeable change in the entire posture and colouring in Sam's face by the end of therapy.

7.3.2 Using a range of treatment approaches to treat trauma-based OCD in adolescents

Although I had identified Somatic Experiencing™ as the central therapeutic treatment methodology, it quickly became apparent that there was significant value in using a range of treatment approaches to treat adolescent trauma-based OCD. It is viewed as vital for therapists to be open to a range of therapeutic methodologies in responding to the client holistically. The humanistic approach (typified by the person-centred approach developed by Rogers) was particularly relevant in Sam's case given the underlying issues of shame and chronically low self-esteem identified in him. Factors such as unconditional positive regard and congruence were critical in providing a space for him to feel heard and acknowledged in the therapeutic space (Rogers,

1986). This links with the SE™ principle of the restorative value of social engagement (Porges, 2003, 2011) discussed extensively in section 2.6. Family systems theory was a further critical influence in the case of Sam. Family systems theory (Bowen, 1978) posits that individuals cannot be understood in isolation from one another, but rather as a part of their family. Sam definitely played a crucial role in the entire system of his family and it was important for him to become aware of this complex role within which he had been cast and to make choices about shifting it. This is highly pertinent to children and adolescents as they are dependent on their family members which increases their susceptibility to systemic dynamics.

Cognitive Theory was another significant treatment methodology. This theory posits that individuals with OCD misappraise intrusive thoughts based on dysfunctional beliefs, such as overinflated personal responsibility for harm, the overvaluation of the power of thoughts, and the overestimation of threat (Rachman, 2002; Salkovskis, 1985). With respect to cognitions, Sam's fears were strongly linked to beliefs regarding the overestimation of threat and his own inflated sense of responsibility. Education was important in allowing him to view his thought patterns and to become aware of cognitive distortions which kept him trapped in the former patterns. This also assisted in helping him to make conscious choices in his thought patterns.

Therapists need to remain open to a range of psychological theories and to think broadly about each case and be open to change if it is indicated. Supervision and working with colleagues are obviously vital in this regard.

7.3.3 Vulnerability in core childhood relationships in contributing to trauma-based OCD

As established in this study, it is important to note that trauma does not necessarily mean that a person experiences extreme traumas such as actual or threatened death, serious injury or sexual violence. There are multiple factors which contribute to a type of chronic trauma in childhood: research shows that a lack of emotional safety in core relationships, loss of a consistent caregiver and chronically mis-attuned caregiving can result in significant internal dysregulation. In Sam's case he described his reaction to

his father's verbal attacks and fits of rage and shouting as a type of "PTSD" (a layman's understanding, but he experienced significant physiological arousal and freeze). There is a plethora of research on brain development to show that the experience of trauma by the child and adolescent is highly pertinent to the developing brain. According to Friedman (2007), who cites Barlow (1988), anxiety is rooted in fear and its manifestation is the preparation to flee. Rachman (1997:793) presents that "obsessions are caused by catastrophic misinterpretations of the significance of one's intrusive thoughts".

Therapy established that it is important to appreciate the role that a sense of lack of psychological, emotional and neurophysiological safety plays on a deep foundational level of OCD development and to work with the client on this.

Once the role of Sam's core guilt and sense of over-responsibility for his mother and anger towards his father were identified, it became critical to guide Sam to re-orient to a fear-free "here-and-now". Levine (quoted in Van der Kolk, 2014) speaks about this process as establishing "islands of (relative) safety" in the client. When Sam grasped the profound truth that his sense of guilt and fear were distorted feelings and were no longer necessary, it was like he moved into an intrapsychic space where he could appreciate that he was never at fault but had felt that way given the relational dynamics and the complex interplay of family dynamics specific to his family.

When trauma, chronic stress or distress is indicated in the client's perceptions, it is important for the therapist to help the client shift their neurophysiology to a perception and state of the sense of safety in the present. Often in therapy the client's fearful experience is in the past but because the activated central nervous system is still perpetuated, they experience the experience or the emotions around the incident as if it is still happening. Clients can be guided to gain insight and perspective into the reality that the fearful past is in the past by assisting them to shift the physiological reactions through the use of SE™ pendulation and titration.

7.3.4 Self-regulation and finding an internal sense of 'relative safety'

At the heart of the SE™ methodology is the concept of self-regulation, the ability to "handle our own states of arousal and our difficult emotions thus providing the basis for the balance between authentic autonomy and healthy social engagement" (Levine,

2010:13). As discussed extensively in Chapter 2, psychological stress and trauma have an intricate interrelationship with physical systems and neurobiological processes. In relation to the core questions for this study (posed in Chapter 1), it could be said that the therapy sessions established that Somatic Experiencing™ assists in alleviating the neurophysiological effects of trauma on the dysregulated nervous system. This study does indicate that this method of neurophysiological discharge and regulation is extremely valuable in assisting the adolescent with trauma-based OCD. This is probably because the value of somatic or body-based psychotherapy, and mindfulness in general, is increasing the awareness of one's own neurophysiological reactions to triggers and the ability to work with those so that one can return to a state of calm when there is no danger in the present moment. The therapist can gradually assist the client to become mindful or aware of feelings of stress or distress at multiple times throughout the day (and not only during high-stress times) so that the nervous system is reminded to return to calm. There are various techniques for this including mindfulness exercises. Others techniques include asking the client to look around the room and identify three items or facts which they notice in the room. If the therapist does this twice or three times in the session it frequently assists the client to internalise how their perception changes as their emotions change. This can bring them to the realisation that emotions and even feelings of fear are not permanent but are changeable and can be changed by the person experiencing them.

7.3.5 Exploring the dysregulating trauma in the neurophysiology of the client

Levine (2010) presents that trauma is the result of the fight/flight or freeze circuits being initiated within neurobiological processes and not being completed. We now understand that there is a bidirectional relationship between the body and the “mind” and that dysregulation is the state of the body when traumatic energy is unprocessed, with residual activation keeping a person in a state of reactivity and readiness. SE™ facilitates the gradual release of traumatic energy stored in the autonomic nervous system while creating corrective interoceptive experiences that physically counterweigh those of immobility and helplessness (Payne et al., 2015). In this way, attention to physical activation and release in order to return to equilibrium can support the resolution of symptoms resulting from traumatic stress. In practice, I have found that clients with anxiety, trauma and OCD seem to carry a sense of “dread” around

with them in their bodies without being consciously aware of it. Clients are encouraged to develop resources – cognitive and interoceptive – which are forms of assistance that help the ANS to self-regulate.

This is viewed as a significant characteristic of SE™ and one which, in the opinion of this author, is not fully appreciated in other therapies such as CBT and EMDR – that even thinking of a past trauma can be extremely fear-inducing in the client and may even have the effects of re-traumatisation in extreme or complex trauma. The recommendation, then, is for the SE™-trained therapist to guide the client to find “islands of (relative) safety” in their body, as therapy develops. The client can then begin to perceive safety in a deeply intrinsic and authentic way which then can be utilised as a resource to assist the client to move towards the fearful thoughts and heightened physiological experiences very gradually at the pace which the client can manage. In this way, the fear is eventually faced while the neurophysiology of the client is used to anchor the client in an experience of safety.

7.3.6 Psycho-education around cognitive distortions and self-constructs

The central tenet of this thesis is that OCD develops from extreme anxiety in response to a sense of threat or lack of safety in the child or adolescent’s immediate environment. A core tenet of CBT models is that OCD-vulnerable individuals are more likely to misinterpret unwanted intrusions that have personal meaning or significance (Salkovskis, 1988). As presented in more detail in section 2.2.2, this may be particularly relevant to children if one takes into consideration Piaget’s delineation of cognitive development and Erikson’s (1997) theory of psychosocial stages of the child. The cognitive distortions, including a sense of shame and blame, and self-rejection, can create a block to the experience of self-regulation and self-acceptance and, therefore, working towards what one could call “normalisation of cognitive appraisal” is critical in this type of therapy.

The recommendation is that therapists utilise their knowledge of the brain and cognitive distortions to educate the client as to how their thoughts create their perceptions and sense of reality. As a biological and survival mechanism, human beings are constantly interpreting the sensory information that enters through our senses in order to ensure that there are no threats out there. However, we are also

constantly applying interpretations and judgements to these perceptions based on our sense of self in the world, experiences of hurt and relational history which often involves feelings of guilt or shame. These interpretations and judgements colour our perceptions and can develop into defence mechanisms which we use to shield our sense of self. Exploring these with the client explicitly in order to make them more aware of how their perceptions and decisions influence their experience of “reality” can be incredibly enlightening and helpful to clients. This can assist further in showing them how externalised their sense of self or locus of control is. Cognitive work around these ideas can be threaded through therapy sessions to address other issues and ramifications linked to the trauma or sense of stress.

7.4 METHODOLOGICAL IMPLICATIONS FOR TREATMENT OF TRAUMA-BASED OCD

OCD is first and foremost a disorder strongly linked to anxiety and/or distress (APA, 2013:235). While Cognitive Behavioural Therapy (CBT) and Exposure Response Prevention (ERP) therapy are most often the first line of treatment, it is presented here that when trauma or extreme stress are significant formative factors, and when these are still held or implicit in the neurophysiology of the client, then specific work with shifting the neurophysiology of the client is indicated.

In distinction to the epiphenomenalistic approach which underlies CBT and ERP (which posits that subjective mental events are caused by physical, biochemical events within the human body and themselves have no causal efficacy on physical events), a number of authors (Levine, 1986, 2010; Van der Kolk; 2014; Scaer, 2001, 2005), argue for the role for a complex neurophysical response to fear, trauma and stress. Stephen Porges (2011a, 2014) and others (for example, Bremner, 2005; Dulmus & Hilarski, 2003; Fox, Oler, Tromp do, Fudge & Kalin, 2015; Schore, 2003) examine the complex brain responses to trauma which, in turn, are linked to reactions in the sympathetic and parasympathetic nervous systems which in turn affects the psychological experience of trauma (possibly reinforcing symptoms characteristic of OCD). It has been established that several symptoms result from the repeated experience of autonomic arousal including re-experiencing or flashbacks, arousal or

symptoms linked to panic and anxiety, avoidance, or symptoms of detachment and apathy.

As presented in numerous studies cited in this study, exposure to trauma in childhood is associated with elevated risk for multiple forms of psychopathology (Borelli et al., 2015; Nakatani et al., 2011; Van der Kolk, 2005a; Walitza, Melfsen, Jans, Zellmann, Wewetzer & Warnke, 2011). The factors which link child trauma with psychopathology are mainly identified as processes which enhance threat processing. These include information-processing biases that facilitate speedy detection of environmental threats, interruptions in learning structures underlying the attainment of fear, heightened emotional responses to potential danger, and difficulty disengaging from negative emotional content (McLaughlin & Lambert, 2017). Corrigan et al. (2011:17) propose that: “the autonomic dysregulation model allows for hypotheses about the associated psychophysiology of involuntary somatic responses to triggers that evoke some component of a trauma memory.”

While the use of SE™ may appear to resemble insight-oriented therapy, it should be clearly stated that this is not a psychodynamic approach where sessions are spent mainly exploring the meaning associated with historical experiences and whereby insight alone is used as the impetus for change. Rather, there is a distinct tracing of neurophysiological factors in SE™ sessions. As discussed throughout this study, the defence response to threat (also known as the “defence cascade”) in the animal model includes arousal, freeze, flight or fight, tonic immobility, collapsed immobility, and quiescent immobility (Kozłowska et al., 2015). These responses are triggered and mediated by neural circuits involving the extended amygdala, hypothalamus, periaqueductal grey, ventral pontine tegmentum, ventral and dorsal medulla, and spinal cord. However, the methodological implication of SE™ is based on the position that the human model is complicated by the subjective representations which imbue experiences with meaning. These, like real external threats, have the capacity to activate the body’s defence systems. Fear states can therefore be induced by combinations of internal and external triggers, some of which will be accessible to conscious processing, and some not. This is where the role of SE™ comes in. In assisting clients to access both the experience of fear as well as the emotional

meaning or 'coupling' (associations) that the individual attributes to fear or stress, allows the client to shift the experience on an emotional and neurophysiological level.

The proposition of this study is that enhanced threat processing is the result of intense or prolonged involuntary impulses of the sympathetic nervous system (fight-or-flee response) and the parasympathetic nervous system (freeze response) when a threat is experienced. Furthermore, the significant factor of coupling dynamics (i.e. cathecting) plays a significant role in meaning-association. It is, therefore, hypothesised that the involuntary impulses resulting from nervous system activation, combined with coupling dynamics, may throw some light on the preservative actions or compulsions which are a defining characteristic of OCD. Studies have shown that OCD is strongly linked to perseverative neurology and challenges with cognitive "set shifting" (Borges et al., 2011). It is presented here that this repetition compulsion characteristic may be linked to the thwarted biological impulse of CNS to protect or re-regulate itself. Levine (n.d.:B3.19) explains that in "traumatic coupling" there is activation (the traumatic trigger) which becomes linked to a perceptual cue from any of the five basic senses. This "overcoupling" (over-association) or "undercoupling" (dissociation) is used to try and keep activation levels decreased or controlled.

A number of therapies attempt to intercede between the fear impulse and the compulsive response. There is extensive research utilising Cognitive Behaviour Therapy (CBT) to shift cognition so that the person can reassess the obsessions and resulting behaviours (Borges et al., 2011; Doron & Kyrios, 2005; Goncalves et al., 2016; Salkovskis, 1985; Salkovskis et al., 1999). This study explored the value of a trauma-based methodology which aims to discharge neurophysiological impulses in order to increase arousal regulation and expand the client's "window of tolerance" (Siegal, 1999). The hypothesis of this study is that when clients with trauma-related OCD are assisted to shift and discharge autonomic arousal, they develop a greater ability to self-regulate arousal, which results in the diminishing or amelioration of distress. This, in turn allows them to engage more effectively in treatments including CBT and ERP. There is a value in guiding the client with trauma-based OCD to learn to self-regulate through body awareness, treatment proceeding at the client's pace and empowerment of the client through processes such as pendulation to self-manage

arousal and dysregulation in order to not become overwhelmed or re-traumatised. However, it has also been proposed that treatments are multi-faceted with body-based therapy, cognitive therapy, family therapy and insight-based therapy making significant contributions.

7.5 LIMITATIONS

7.5.1 Limitations in methodology

As with all studies, this study has several limitations. The most apparent limitation is that, as a single case study within the qualitative phenomenological paradigm, specific details from this case cannot be generalised to other cases. However, from the outset, it should be highlighted that the specific goal of this study was to provide a rich and detailed exploration of the subjective thoughts and experiences as constructed in the mind of the client undergoing treatment. In light of this, and the exploratory nature of the treatment methodology, it is felt that the detail and depth required from this was suitable to a single case study.

Another limitation was the nature of the instruments used for data collection. Interpretive Phenomenological Analysis (IPA) is based on my subjective analysis of data and extraction of themes. It is highly probable that another researcher could deduce other themes from the data. It can be asserted that the client experienced a sense of relief through the therapy and was able to establish “islands of relative safety” which he used to begin to challenge his obsessions and compulsions, sometimes without being prompted to do so by me.

7.5.2 Limitations in practice

Data was collected via therapeutic sessions that were conducted with the adolescent within the interpretivist paradigm to understand the subjective world of human experience (Guba & Lincoln, 1989). The interpretation of data presented is only one possible construction of an interpretable reality, but not the only credible interpretation of that reality. My subjective interpretation of trauma, and the effects of this, no doubt played a role in the entire process of this study, from the identification of the question to the implementation of the therapy.

This study started out with the hypothesis that if an adolescent presents with OCD and there is intense or chronic stressor or trauma-related dysregulation in the neurophysiology of the adolescent, then there may be a role for the application of a trauma-based treatment methodology. The theory behind somatic therapy is the proposition that trauma symptoms are the effects of instability of the autonomic nervous system (ANS). Somatic Experiencing™, as a well-developed trauma treatment methodology, was used to assess this hypothesis. This study reflects the focus on research as action (Terre Blanche et al., 2006) as it is essentially founded on the evidence-based practice position which posits that there is value in identifying how the individual perceives and experiences something (e.g. a treatment methodology) in psychological research. The value of this study is to posit that there is evidence to show that a treatment methodology which incorporates working with the neurophysiology of clients has a place in trauma-based OCD with adolescents. This opens the door for further research to explore body-based trauma methodologies when working with trauma-related OCD in adolescence.

A further limitation was that the client's own responsiveness to the treatment methodology was also affected by an unknown variable at the time that therapy was initiated. The client happened to be a person who was already sensitised and attuned to his body. He was already involved in keeping his body healthy and fit and, once therapy had begun, he pursued avenues such as meditation out of his own interest. This may well have played some role in his predisposition to the treatment methodology used.

A final limitation was the role of Sertraline (a selective serotonin reuptake inhibitor) in confounding the effects of the treatment methodology of SE™. Indications of depression and suicidal ideation prompted me to recommend to the client's mother that the adolescent be assessed by a psychiatrist. The psychiatrist placed the client on Zoloft towards the end of therapy.

7.6 TRUSTWORTHINESS

Despite these limitations, it is presented that this study is trustworthy. Yin (2011) argues that the selection of the case is vital in determining whether the case is to be multiple or single. He supports the single approach for a case study, referring to it as

“a revelatory case”, and argues that the single-case approach produces “in-depth descriptive and exploratory knowledge”. It is presented that the case study involving Sam is such a case as it provides a rich study. Furthermore, multiple sources of data were used to explore the rich tapestry of this case and triangulation was implemented throughout the analysis. These included ongoing feedback to Sam in meetings with his mother, analysis of video recordings, analysis of therapy sessions in supervision, constant reflection on my part and discussion and analysis with my own therapist.

Guba (1981) proposed a four-criteria model of trustworthiness. These are “truth value, applicability, consistency and neutrality. Truth value considers “how confident the researcher is with the *truth* of the study’s findings” (Lincoln & Guba, 1985). A method of assessing the truth value is the process of the findings being reviewed by a supervisor or colleague familiar with the phenomenon to assess the truthfulness of the data (Krefting 1991). This was pursued with ongoing supervision by a psychologist with extensive experience and a specialisation in SETM. Furthermore, the findings were shared with the client and his mother in order to meet the criteria of respondent validation; a follow-up meeting was then held to discuss their responses in detail. These were integrated into the findings and writing-up of the thesis. Finally, the truth value was also enhanced through collecting data over a protracted period of time.

Applicability (Lincoln & Guba, 1985) refers to how much the findings can be applied to other contexts or cases (Krefting 1991). Corcoran et al. (2004) argue that case study research is “introspective and grounded in just one setting”. Corcoran et al. (2004) suggest that if the purpose of the study is to improve practice in just one specific setting, this reflection may be valuable. They also recognise that the purpose of the case study research can be to contribute to the wider evidence base. To this extent, while it is widely agreed that the findings of one case study cannot be applied easily to a broader research population, they are applicable to the generation of theories. As Yin (2014) argues, the case study methodology is designed to develop “expand and generalise theories so that these can then be applied to broader contexts. (Yin 1994).

The third criterion of trustworthiness is that of consistency of data and asks whether the findings would be consistent if the study were to be replicated (Guba 1981, Krefting

1991). Guba (1981) argues that a great degree of variability is to be expected because of the naturalistic nature of qualitative research. Consequently, Guba (1981) suggests the notion of dependability whereby data is assessed through the use of an audit trail to ensure accurate data collection. In the case of this study, a thorough audit trail was established with the video recordings of each session, supervision notes and coding of transcripts.

Guba's (1981) final criterion for the trustworthiness of data is neutrality which is the extent to which findings are the result of the participants in the research, and not the result of external influences or biases" (Kreftling 1991). Neutrality is linked with confirmability (Kreftling 1991). As with truth value, triangulation and reflexivity are used to establish neutrality in qualitative studies.

There is a compelling evidence-based practice (EBP) momentum which acknowledges the need to explore individual experiences and advocates for the need for such studies to improve treatment outcomes by informing clinical practice with relevant research (APA, 2006).

7.7 CONCLUSION AND CONTRIBUTION OF THIS STUDY TO THE TREATMENT OF TRAUMA-BASED OCD

The proposition of this study is that there is a place in psychopathology for a category of obsessive-compulsive disorder (OCD) which is preceded and affected by trauma. I have referred to this as *trauma-based OCD* in this study. As identified in *The Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* (APA, 2013:235), OCD is diagnosed with the occurrence of obsessions (repeated and unrelenting notions, feelings or images) and compulsions (habituated actions or thoughts) which cause heightened anxiety or distress. This thesis has presented significant research which identifies the link between the mind and body, substantiating the argument that the obsessions in the mind are intricately influenced by the dysregulation in the body. Porges (2003, 2011), in his Polyvagal Theory, presents that *neuroception* (the ability of the senses to detect safety or danger and to initiate responses in the nervous system) initiates the involuntary impulses of the sympathetic nervous system (fight or flee response) and the parasympathetic nervous system (freeze response) and that

these – along with the more current evolutionary system of social engagement – form the basis of our self-protective neurobiology (Porges, 2011). As a result of the link between the brain and cognition and the body, therefore, it can be understood that a necessary part of the diagnosis of OCD is that the individual feels compelled to do the compulsions and that these are not experienced as voluntary (APA, 2013:238).

Throughout this study, research has been cited which indicates that there is a link between “stressful life events” (SLEs), particularly trauma (TLEs), and the development of OCD symptoms (Borges, et al., 2011; Cromera et al., 2007; De Silva & Marks, 1999; Lin et al., 2007; Lochner et al., 2002; Rozenman et al., 2017).

Dinn et al. (1999) have posited that anxiety – which is evoked by the effects of trauma exposure – leads to the excessive labelling of stimuli as dangerous or threatening. In turn, compulsive rituals are employed to reduce the excitation. It is proposed in this study that these compulsive or perseverative actions may well be an attempt to discharge the visceral and neurophysiological reactions to trauma. Based on this argument, it is therefore viewed as critical to acknowledge and grasp the effect that trauma has on the individual’s neurophysiology and, subsequently, on the development of OCD. Given the effects of trauma on neurophysiology, I have explored the position that it is necessary and valuable to include a trauma-based treatment methodology in therapy when working with clients with OCD. This study explored the value of Somatic Experiencing (SE™) in addressing the core aspects of OCD which are linked to the neurophysiology of trauma.

The focus in this study is on the developmental stage of adolescence. According to Mathews, Kaur and Stein (2008), emotional abuse or neglect in childhood is a pertinent factor in the development of obsessive-compulsive symptoms (OCS) in childhood and adolescence.

The aim of this study is to show that there is a significant role for therapists working within the field of trauma-based OCD to address the client’s autonomic arousal and the specific cathecting or coupling of trauma symptoms. The over/under-coupling or cathecting of the neurophysiological trauma plays out in specific muscle and body

postures which are underlied by a myriad of complex internalisations and beliefs connected to psychological valences in the client. Through negotiating and gaining insight into these connections and valences, the therapist is able to guide the client to uncouple the connection to the client's nervous system and their experience of safety in their world. It is posited here, that only then is the client able to gain a type of freedom from the fear and is able to work with separating him- or herself from it utilising techniques found in insight-oriented, CBT and ERP therapies.

Further research is needed with multiple cases of trauma-based OCD in childhood and adolescence in order to continue exploring fully how Somatic Experiencing™ and other somatic methodologies works to assist in neurophysiological self-regulation and counter obsessions and compulsion in paediatric and adolescent OCD. Studies which include mediating neurophysiological regulation to the family members which dysregulate the child's environment would also be fascinating to assist in buffering the development of psychopathology in children and adolescents.

Finally, it would be extremely valuable to understand if, in trauma-based OCD, compulsive or perseverative thoughts and actions are in fact the result of the thwarted autonomic arousal release mechanism. Fisher (2010:6), cited in Olssen, 2013, states that:

The responses have to be completed rather than discharged. This is the reason that they keep repeating and why clients often have a very wonderful experience of discharge at a therapy session followed by the feeling of being just as depressed, just as anxious, just as overwhelmed as before. It's because discharge alone doesn't change these patterns.

Therefore, it would be valuable to investigate if perseverative behaviours or thoughts characteristic of OCD can be completed, and not simply discharged, whether these diminish or even become extinct once discharge occurs.

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APPENDICES

APPENDIX 1: LETTER OF INFORMATION FOR STUDY FOR REFERRING PRACTITIONERS

Ashley Berman – Educational Psychologist

M.Ed Educational Psychology(Cum Laude) (UJ)

M.Ed Special Education(Columbia)/B.EdHon Rem Ed (Wits)

HPCSA No.PS 0126330/Practice No.086 003 0565733

PO Box 2152 Highlands North 2037

072 234 0343/ashleyberman3@gmail.com



Dear Practitioner,

Doctoral study on the use of Somatic Experiencing™ in the treatment of adolescents experiencing trauma-based obsessive compulsive disorder (OCD)

The goal of this study is to explore whether a treatment approach which has been applied to trauma - called Somatic Experiencing™ - can assist adolescents who present with trauma-based OCD. I am requesting practitioners to share this study and the possibility of participating with clients whom they feel fit the criteria and may benefit from the therapy approach. If SE™ has a value for adolescents (ages 12-18 years) experiencing trauma-based OCD, I believe this will be a valuable contribution to the field of OCD.

Participants will participate in individual therapy sessions for between 3-6 months; family sessions will be held in order to explain the research only and to gain consent. Sessions will be held on weekly or bi-monthly basis at the minimum for 50-60 minutes depending on the age of the client. I am prepared to travel to the client if it is about a 30km radius from where I live near Highlands North. There will be no charge for the sessions.


The participants and their families will not be identified in the research findings. Only the researcher and the supervisor will have access to the raw data. As a trained educational psychologist participants will be emotionally supported in a holistic manner during the therapy. The inquiry will be recorded for the purpose of analysis, supervision and to ensure the validity of the findings. The study will be carried out under supervision from the University of Johannesburg as well as under the guidance of an SE™ specialist (SE™ is a three year

specialization run under the auspices of MEISA). The researcher has been fully trained in SE™. The supervisor for this study is Dr Helen Krige (Senior lecturer in Educational Psychology at UJ, Co-ordinator of BEd Honours Educational Psychology and project manager: Education of children with Neurodevelopmental Disorders).

If the supervising adult/parent and client indicate an interest in participating in this study, the researcher will meet with them to discuss the nature, scope and purpose of the research in detail. More than one meeting can be held in order to explore follow-up questions and/or any other needs. Such meetings will cover all questions as well as the aims of the research, how SE™ works as a treatment methodology, what would be expected from the supervising adult/parent and the adolescent, the possible advantages and disadvantages of participating in a study of this nature, the nature of consent and the client's right to withdraw from the study at any time. The participant and the supervising adult/parent will be presented with a written Letter of Information before signing the consent and assent forms. Procedures involved will be the implementation of Somatic Experiencing™ during therapeutic sessions over the duration of 3-6 months, depending on the needs of the client.

Ethical considerations will be thoroughly adhered to with regards to gaining ethical approval from UJ, to gaining consent/assent, to filming (i.e. written and signed consent from parents and client, with therapist insuring full understanding of the role and purpose of such filming) and with regards to confidentiality. Documents detailing the client's history will be obtained with client consent where they exist. It will be important to have a current or existing client diagnosis of OCD from a psychiatrist or doctor. If past therapies have been implemented then feedback from the psychologist will be obtained with consent and where possible.

Thanking you

A handwritten signature in cursive script that reads "Berman". The signature is written in black ink and is positioned above a solid horizontal line.

Ashley Berman (Educational Psychologist)

APPENDIX 2: CONSENT FORM (FOR PARENT)

Ashley Berman – Educational Psychologist

M.Ed Educational Psychology (Cum Laude) (UJ)

M.Ed Special Education (Columbia)/B.Ed Hon Rem Ed (Wits)

HPCSA No. PS 0126330/Practice No. 086 003 0565733

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PARENT/GUARDIAN CONSENT FOR THERAPY

This letter serves to acknowledge parental consent for your child to participate in therapy sessions with myself, Ashley Berman. Please note that this consent includes the filming of the therapy sessions for the purpose of this doctoral study (i.e. analysis of the sessions).

It affirms that you do understand the nature of the study and that sessions will be filmed as part of this study and will be shared only with the clinical supervisor. I am undertaking research for a doctorate in psychology. I am doing my study on the effects of Somatic Experiencing (SE is a therapeutic method created by Dr Peter Levine) on trauma-based OCD. Many research studies on OCD show that obsessions and compulsions can be linked to the experience of developmental stress.

I believe that the therapy approach of SE can assist the client to release the stress or trauma that is held in the body. Studies of the brain and the body show how closely linked the 'mind' and body are. That is when a high level of or ongoing stress is experienced, the muscles, organs and joints 'hold' that stress as well as the mind. So, if we want to improve the stress we must also work with the body responses. This study aims to evaluate if and how SE™ can assist to minimize the anxiety, and obsessions and compulsions which are experienced.

All information will be regarded as strictly confidential and names and any other identifying information will be changed in the published study. This will include details of family experiences so that these are presented in such a way that specifics (names, places, dates, exact occurrences) will not be used. Parts of the filmed sessions may be shared with one clinical supervisor who has many years of experience supervising Masters and Doctoral

students and is highly trained in the ethics of confidentiality. She does not reside in the community in which we live.

Any information shared by your child will be kept confidential as the relationship between a client and therapist carries communication privileges and rights to confidentiality. If your child divulges information that I feel should be shared with parents or other professionals, I will encourage him/her to do so or request permission for me to discuss the matter with parent/professional.

There are specific situations in which I am required by law to share details of sessions with the appropriate authorities. These situations include:

- ◇ If a client reports abuse or I suspect neglect, physical or sexual abuse
- ◇ If an individual threatens to harm him/herself or others
- ◇ If my records are subpoenaed by the courts for purposes of litigation

Additional details include the following:

- ◇ There will be no fees charged for these sessions.
- ◇ Your child is free to terminate therapy at any time.
- ◇ Therapy will continue for as long as it is experienced as positive and helpful to your child.

I, _____, declare that I have understood and agree to this contract and that I provide consent for my child to be in therapy with Ashley Berman.

Parent/guardian name

Parent/guardian signature

Date

APPENDIX 3: ASSENT FORM (FOR CLIENT)

Ashley Berman – Educational Psychologist

M.Ed Educational Psychology (Cum Laude) (UJ)

M.Ed Special Education (Columbia)/B.Ed Hon Rem Ed (Wits)

HPCSA No. PS 0126330/Practice No. 086 003 0565733

PO Box 2152 Highlands North 2037

072 234 0343/ashleyberman3@gmail.com



CLIENT ASSENT FOR THERAPY IN A DOCTORAL STUDY

Dear Client,

I am a practicing psychologist undertaking research for my doctorate. I am doing my study on the effects of Somatic Experiencing™ (a therapeutic method created by Dr Peter Levine) on trauma-based OCD. Many research studies on OCD show that obsessions and compulsions can be linked to the preceding experience of stress or trauma. Stress or trauma can result from everyday experiences of threat or lack of safety (such as parental fighting, bullying, divorce etc.) especially where the development needs of the child are concerned.

The therapy approach of SE™ can assist in the release of stress that is held in the body. Studies of the brain and the body show how closely linked the 'mind' and body are. That is when a high level of or ongoing stress is experienced, the muscles, organs and joints 'hold' that stress. Therefore, SE™ works with the body and the emotions or the 'mind'. If stress or trauma plays a role in the development of OCD, then it would be valuable to see if SE™ can assist to minimize the obsessions and compulsions.

The process is that of conducting therapy sessions with yourself whereby I will implement the SE™ methodology along with other treatment approaches depending on your needs and the individuality of your case. I will require your consent to film the sessions so that I can analyse the process and assess the value of the method for this

type of disorder. The analysis will take place separately to and after your sessions have ended.

As a psychologist I am bound by strict ethical rules implemented by the governing body (HPCSA). Complete confidentiality will be applied to you and your family, real names and any revealing details (such as school name etc.) will be replaced with made-up names. Only my supervisor will have access to the videos to support my best practice as a therapist. All research materials and transcribed data will be kept in a locked cupboard in my office and will be destroyed after the required period of 6 years.

Any information shared by you in therapy will not be shared with your parents without your consent. If you share information that I feel should be shared with your parents or other professionals, I will encourage you to do so but the choice is up to you. There are, however, several situations in which I am required by law to share relevant details of sessions with the appropriate authorities. These situations include if a client reports abuse or I suspect neglect, physical or sexual abuse, if an individual threatens to harm him/herself or others, and if my records are subpoenaed by the courts for purposes of litigation.

You are free to terminate therapy at any time (note: according to South African law a child of 14 years or older can request to remain in therapy without parental consent).

I _____ declare that I have understood and agree to this contract in full.

Client name

Client signature

Date

Sincerely,

Ashley Berman

APPENDIX 4: ETHICAL CLEARANCE CERTIFICATED FROM UNIVERSITY OF JOHANNESBURG

NHREC Registration Number REC-110613-036



ETHICS CLEARANCE

Dear Ashley Berman

Ethical Clearance Number: Sem 2 2018-016

THE USE OF SOMATIC EXPERIENCING™ (SE) IN THE TREATMENT OF AN ADOLESCENT WITH TRAUMA-BASED OBSESSIVE COMPULSIVE DISORDER (OCD)

Ethical clearance for this study is granted subject to the following conditions:

- If there are major revisions to the research proposal based on recommendations from the Faculty Higher Degrees Committee, a new application for ethical clearance must be submitted.
- If the research question changes significantly so as to alter the nature of the study, it remains the duty of the student to submit a new application.
- It remains the student's responsibility to ensure that all ethical forms and documents related to the research are kept in a safe and secure facility and are available on demand.
- Please quote the reference number above in all future communications and documents.

The Faculty of Education Research Ethics Committee has decided to

Grant ethical clearance for the proposed research.

Provisionally grant ethical clearance for the proposed research

Recommend revision and resubmission of the ethical clearance documents

Sincerely,

Dr David Robinson

Chair: FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

APPENDIX 5: SE™ TREATMENT GOALS

Somatic Experiencing process with traumatized clients are:

- a. Establish an environment of *safety*; offer support to explore and accept their body sensations;
- b. Establish *pendulation* and containment: the innate power of rhythm;
- c. Use *titration* to increase stability, resilience and organization;
- d. Provide a corrective experience by supplanting passive responses of collapse and helplessness with active, empowered, defensive responses;
- e. Separate or uncouple the conditioned association of fear and helplessness from the biological immobility response;
- f. Resolve hyper-arousal states by gently guiding the discharge and redistribution of the survival energy mobilized for life-preserving action while freeing that energy to support higher-level brain functioning;
- g. Engage self-regulation to restore dynamic equilibrium and relaxed alertness;
- h. Orient to the here and now, contact the environment and re-establish the capacity for social engagement.

APPENDIX 6: EXCERPTS FROM INITIAL ANALYSIS AND CODING OF TRANSCRIBED SESSIONS

Session 1: main point summary	Analysis / ideas	Reflections
<p>Session 1: main point summary</p> <ul style="list-style-type: none"> explaining that he can't watch a video again or think a thought again. "It will change my luck" can't repeat...especially 3 x (lucky number) self monitoring thoughts all the time (in therapy as well)...think far back (in 2015) has to distract own mind with any thoughts/statement change my luck? will change relationship to people, shyness (control) AB: "let's go that feeling" ... Sam scrunched up face having to constantly self monitor. "makes my brain go crazy" AB: find a place in body which feels good or neutral placid peaceful wanted to be a gymnast lats – peacefulness...when the anxiety comes allow it to come and go to your lats and acknowledge that there is a part of the body which is peaceful (AB: face - deeply happy) SAM's words : "the lifetime of the OCD" AB: intro body as a resource "thinking is huge...in my mind" ...a lot more difficult to comprehend...have to monitor constantly irrational thought process? yes and no AB: It is going to start subsiding when we start getting rid of the fear on a physiological level <ul style="list-style-type: none"> thought processes are some kind of attempt to help you feel safe 	<p>Analysis / ideas</p> <p>theme of control (lack of and trying to gain):</p> <p>Swimming pool...chased by monster... 10s to get across</p> <p>Stress of having to constantly self monitor</p> <p>Can't repeat and especially 3 times</p> <p>Scrunching up face...colour infused in face</p> <p>Calves...don't think about them a lot - AB could have stayed there longer and had him feel them more</p> <p>Enjoys the strength of his body</p> <p>Body beauty or strength means a lot to him</p> <p>He is naturally in touch with feelings in his body</p>	<p>Reflections</p> <p>I'm feeling confused by his god.</p> <p>Compared to M:</p> <p>Whats his trigger for god?</p> <p>When younger...was it dad's unstable/erratic outbursts? how firmly can I argue this?</p> <p>Maybe increasing sense of lack of worth culminated in an attempt to try and stem the flow, therefore, my 'luck' wont change</p> <p>Shame belief? I am inadequate...</p> <p>Sense of pressure...swimming pool and needing to get to the other side within 10 seconds.....? Sense of pressure, fear</p> <p>Only sense of inadequacy from school/social issues...no memory of fear...ask mom</p> <p>> (mom said that there were consistent outbursts from dad even when Sam was young)</p>

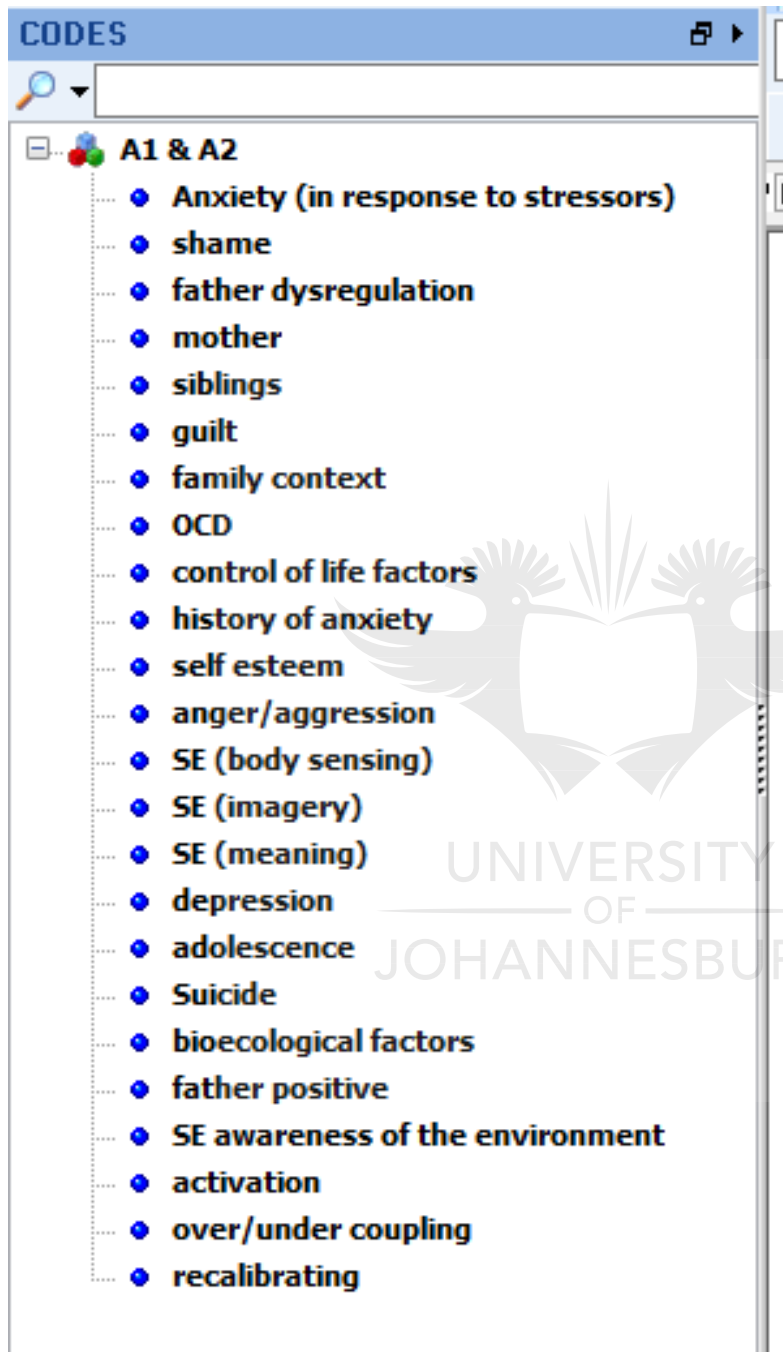
Session 4.1. NB RE. SE	Analysis	Reflections
<p>OCD is exhausting... takes up at least 75% of mental space</p> <ul style="list-style-type: none"> wants actions to try stop the ocd. most recent ocd thought today: tiles – it tells me to not walk there but I say "screw you" <ul style="list-style-type: none"> 'screw you' part when I walk there, it feels good but I feel like it betrayed myself = 'betrayal of self' – WHY? Deal with sense of betrayal... sense of betrayal of self will come up... this is part of the ocd walking up the road today... road sign... thought don't touch it... otherwise you'll screw yourself over.... go to the body... when I wake up, "here goes another day of ocd" go to that place (of "shit...ocd") physical reaction to betrayal ... <ul style="list-style-type: none"> SAM: a lot of fear (scary creepy monsters), caring....(AB: linked to shame) floor mats... screw you.... a lot of thoughts – if you think that thought (you thought before, or of thought another person), it all makes me upset... thought that I am going to be (like) that person thoughts make me upset... I'm going to be like him AB: fear that someone can change me disgusting sexual thoughts in my head AB: it increases the shame call the part of ocd = "core" (name it)... feel like my head is about to pop; the thoughts are more in the head, but the actions are more in the core AB: stay with the core: take me through your body this morning <p>Feelings in the body:</p> <ul style="list-style-type: none"> I woke up... head still running... made me nauseous <ul style="list-style-type: none"> usually, my mind is still awake in my sleep 	<p>NB - Sense of betrayal ego state of anger and defiance split between fear and defiance... wanting to assert own truth</p> <p>awareness of lack</p> <p>internal voice of shaming disgusting sexual thoughts (it forces them on me... it's not me) increases the shame</p> <p>fear and anxiety</p> <ul style="list-style-type: none"> fear = real threat right now anxiety = worry that something could happen in the future <p>NB. Shame Shame to do with attachment issues Resistance to the shame (normal) – wanting to open eyes</p>	<p>I am still feeling so 'scared' that I am failing at this... feel very inadequate. Projecting my sense of inadequacy onto SAM?</p> <p>Finding something in my space to bring energy levels down ego states - can't do something about everything</p> <p>Rescuing versus empowerment</p> <ul style="list-style-type: none"> - giving ego strength - investment in safety and stabilization - symbol eg. acorn seed... - trusting myself <p>LOOKING AROUND AT PLANTS, LOOK AT THE STARS/MOON, NIGHT NOISES, HIT BALLOON GRAVITY...GROUNDING</p> <p>Looking again at this session I think it was a pretty powerful session... felt like there was deep work....</p> <p>discuss with EF Also, re. sexual thoughts and ocd</p> <p>https://sdaa.org/learn-from-us/from-the-experts/blog-</p>

<ul style="list-style-type: none"> o don't get a deep sleep... • arms, goose bumps, feel blood pumping (now, in the morning go straight into the thoughts)...frustration and the anger • when I wake up and my ocd starts happening I'm like "this is what caused so much trouble" <ul style="list-style-type: none"> o in camp, 2 years ago in grade 7, ocd, was telling me what to say/what not to say o feel like it has destroyed me • identified below the belly button (more primal...sexuality???) <ul style="list-style-type: none"> o (yawning a lot...drained) • what is that feeling? • shame, fear • if you would give the shame a colour....? • colour – purple, deep purple • AB: feelings around the shame <ul style="list-style-type: none"> o feelings around...difficult to stay with it, eyes twitching...:(AB: resistance to going there?) o shame – making my hands pump more blood, head throbbing...colour? yellow o making me very tired o AB: shame is very very draining...if shame could say something, what would it say? <ul style="list-style-type: none"> o shame: what would it say: "Fuck you", "you messed your life up" • AB: find a place that feels good, normal • no real feelings in shoulders but they feel broad, outgoing, laterals feel strong • stay with the feeling • shoulders that are strong...what does it say, could you give it a colour?...gold • what might it say? "you're a lekker oke" – say it slowly, and feel it and own it in your body shiny gold, metal, hard • feels like meditating.... deep breathing, eyes are not twitching, looks calm • what's happening to feelings in shoulders? and purple in stomach? • SAM: was pumping gold against the purple, now it's calmed down • AB: gold is very very strong...concentrate on that feeling...use breath 	<p>Messages in head: "you messed up your life, fuck you"</p> <p>shoulders but they feel good, outgoing, laterals feel strong</p> <p>stay with the feeling</p>	<p>https://consumer/how-take-power-back-intrusive-thought-ocd: somewhere within an obsession is the flip side of a core value....research studies found that when this (disgusting thought) list is shown to a non-clinical sample, approx. 90% agree to having experienced some of the intrusive thoughts...they are most often only mildly bothered by them. In contrast, ...those diagnosed with OCD, experience severe distress in experiencing the thoughts</p> <p>https://moodsmith.com/intrusive-thoughts/</p> <p>brain learns through association (eg. reading), so don't reinforce association bet anxiety and thought...retrain your brain (CBT)</p>
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<ul style="list-style-type: none"> • SAM lots of exercising...exhausted • pushing self hard to exercise • improvement at Moa Tai... consistency • AB: brain trying so hard to protect you... doesn't want you to feel good about your looks because you will be disappointed/hurt • Feel shame about looks • felt shame so often when younger... not good at talking to girls (boys with girlfriends, kissing... won't ever be me); grade 1 re. stickers • brain 'made a decision' about self when we are hurt (eg. I'm stupid)... subconsciously • scared SAM listened, made a decision based on those experiences... to be scared • not the truth... <p>5.3</p> <ul style="list-style-type: none"> • Can you remember a time when you might have felt shame or wrong for being who you are? • happened a lot when I was younger... now I've stopped giving a shit • grade 1... collecting stickers... I wanted to swap... one girl said 'shut up' to me... felt really really hurt... thought about it the whole day • AB: what decision do you think you might have made as a young child when she said this and did 'shut up' • AB: you learnt to listen to the outside person... scaredness; <ul style="list-style-type: none"> o but not truth, a decision that Sam made... build up a belief system (The Help – black maid trying to influence the decisions the little girls was going to make about her self. worth) o today you can change that • AB: when, when you were young, did you think "I'm the problem" • when I was younger, needed help with a lot of things, a lot of work... IK is very smart, made me feel stupid... short tempered, got irritated and made me feel stupid • (SAM leaning forward... twisting fingers... yawning) I don't take into account that bes. in varsity 	<p>Brain is trying to keep him safe... won't let SAM feel ok about himself</p> <p>Highlighted self-fulfilling</p> <p>part of his thoughts... I can't do this, I don't do this therefore</p> <p>NB SHAME AND SELF ESTEEM</p> <p>GUILT – WHO RELAYED THE FEAR OF LIFE?</p> <p>Decisions made as a child</p> <p>Discuss self-worth... how it develops, how we can impact it</p> <ul style="list-style-type: none"> - Sam is using different standards to judge self and others... wants to be perfect... setting self up for failure - Just note are all the popular boys really that attractive? really aren't all thin, good looking etc. SAM uses many cognitive distortions 	<p>AB trying to 'rescue' SAM</p> <p>Trying to make him feel like he is okay...</p> <p>Boundaries... I am not responsible for rescuing my client... 'you're okay'</p> <p>SLOW DOWN THE HAND MOVEMENTS AND INTERNALIZE THE FEELING THAT I CAN DO ANYTHING</p> <p>Do it again and do it slower</p> <p>Let it go broader</p>
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Session 7: main point summary	Analysis / Ideas	Reflections
<p>Session 7: main point summary</p> <ul style="list-style-type: none"> Session was very much around discussion of his cognitive distortions devaluing the present attainments by saying "but" ... "I have to get (over) there" ... people who say this, get "over there" and it still isn't good enough to be happy because they believe where they are isn't enough SAM shared that he was having thoughts of suicide Tile stepping ... didn't want to go back but did ... felt guilty about going back "I can't do this, there's no future for me, I'm not good with girls, everyone knows what's going on and I don't"; stress from OCD, from amount of work, from people ... Depressed ... it started last year. went to GP, put him on Cipralex. SAM was feeling happier but felt his marks were decreasing; then went to Dr Duncan and she left him on Cijp and diagnosed him with OCD; concerned to go back on meds bec of marks AB explained there wouldn't be a correlation betw marks and med suggest he goes back on it ... AB: not sure Cijp is best med for OCD <ul style="list-style-type: none"> (AB discussed with mom) AB: amount of stress is too much (normalize) Teenagehood is very difficult time (see problems without seeing what will be in the future) ... life is going to get better Opened up to Friend (helped SAM with OCD at camp, grade 8) Want to have a significant life Meds: went off it (felt better on it but marks slipped ... felt it was bec of meds) OCD thoughts: If you don't do this then you wopt get abs and abs wopt be seen as beautiful ... the whole world will change, I won't be myself (SAM: irrational thinking) 	<p>Analysis / Ideas</p> <ul style="list-style-type: none"> Suicide: NB to ask SAM: hanging comment Proportion of day with suicidal thoughts. In a given hour, how much do you think about suicide? How well can you push away suicidal thoughts and think about something else (scale 1-10) To what extent do you think you can resist suicidal urges (scale 1- 10) If a teen does not report current SI, it does not mean that he/she is not at suicide risk https://adbaa.org/sites/default/files/Spirito_MC_10.pdf mood/energy: quite flat: I feel like I've stopped caring discussed him going back onto meds The Most Common Cognitive Distortions 1. Filtering. We take the negative details and magnify them while filtering out all positive aspects of a situation. 2. Polarized Thinking (or "Black and White" Thinking). In polarized thinking, things are either "black-or-white." We have to be perfect or we're a failure — there is no middle ground. 3. Overgeneralization. In this cognitive distortion, we come to a general conclusion based on a single incident or a single piece of evidence. 4. Jumping to Conclusions. 	<p>Reflections</p> <p>Really concerned that I don't know how to do the SE ... was he just too exhausted?</p> <p>I do feel like the discussion around self-esteem, distorted thinking etc. is very very ab, as he is so unaware of how his thoughts are manipulating him)</p>

APPENDIX 7: EXCERPTS FROM QDA MINER LITE V2.0.5 WITH CREATION OF CODES DEDUCED FROM INITIAL ANALYSIS OF TRANSCRIPTS



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

THE USE OF SOMATIC EXPERIENCING™ IN THE TREATMENT OF ADOLESCENTS EXPERIENCING ANXIETY AND OBSESSIVE COMPULSIVE DISORDER.

Initial session with mom

- Mom really wants her son to get help with his ocd
- Mom is conflicted about dad and dad's role in creating stressors in household (re. dad's irrational anger, mom tries to intercede but also tries and gets the boys to not respond... conflicted enabler?)
- mom does present dad as being main 'dysregulator' in the family, but dad has cancer and isn't doing well and mom is very conflicted about dad's behaviour being included in the thesis

Spoke to EF/supervisor about mom's conflict:

20 March 2018

- mom's concerns about this study: husband is terminally ill and she doesn't want the study to be a permanent statement to what he did wrong as a father
 - Dad diagnosed with x in 2017
 - dad has a history of being very explosive and irrational (mom said – lousy upbringing) - DYSREGULATION
- Sam (client, youngest brother) has taken on the role of peacemaker between brothers and dad... relationship is very explosive relationship between dad and older brother.
 - Sam's 'story' about the fridge and that dad gets upset if fridge stays open for more than 15 seconds

The diagram illustrates the relationship between various factors. On the left, 'mother' is connected to 'Anxiety (in response to stressors)'. 'Anxiety (in response to stressors)' is connected to 'father dysregulation'. 'father dysregulation' is connected to 'bioecological factors'. On the right, 'bioecological factors' is connected to 'father dysregulation'. 'father dysregulation' is connected to 'family context'. 'family context' is connected to 'mother'.

CODE: history of anxiety

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Seconds

o Sam feels responsible for mom's emotional suffering?

- "Times when boys were young that dad would get incredibly angry over small things" (mom)
- middle brother also suffers from OCD – very perfectionistic and tortures himself

Session 1: main point summary

- explaining that he can't watch a video again or think a thought again. "it will change my luck"
- can't repeat... especially 3 x (lucky number)
- self monitoring thoughts all the time (in therapy as well)... think far back (in 2015)
- has to distract own mind with any thoughts/statement
- change my luck? will change relationship to people, shyness (control)
- AB: "let's go that feeling"... Sam scrunched up face
- having to constantly self monitor "makes my brain go crazy"
- AB: find a place in body which feels good or neutral placid peaceful
- wanted to be a gymnast
- lats – peacefulness... when the anxiety comes allow it to come and go to your lats and acknowledge that there is a part of the body which is peaceful
- (AB: face - deeply happy)
- Sam's words : "the lifetime of the OCD"

mother
father dysregulation
siblings

OCD
control of life factors

OCD
control of life factors

SE (body sensing)

SE (body sensing)

CODE: self esteem

1
2
3
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19

Sam: (over previous note)...source of energy drains...putting it out (mana movement out)...

AB: depletion?...symbolically, what you are doing when you look at someone else for their opinion...?

Put your hand on the energy leakage

Does it change anything?

Sam: a little bit

I'm very hopeless

AB: you're allowed to be in pain, you're allowed to cry, it is a painful time in your life

I would like you to feel how real and whole Gadi is even if you aren't accepted by others...is there any way you can touch or feel the sensation that "I'm ok"?

Sam: no

AB: take a deep breath, look around again...anything else that you notice?

Sam looking for agitated....leg jiggling

OCD: old habits and shit....getting aggressive...ridiculous

AB: its not ridiculous...lets go to the aggression....where do you feel it?

Sam: arms, muscles

AB: angry, hot...if they could find a voice what would they say?

Sam: Fuck you world

AB: encouraging movement....

SE (body sensing)

SE (body sensing)

OCD
anger/aggression

anger/aggression

anger/aggression

APPENDIX 8: EXTRACTS FROM RESEARCHER'S SUPERVISION AND REFLECTION NOTES

Supervision re. Session with SAM and mom:

18 July 2018

- I asked to meet with mom and son. felt that SAM was struggling with many issues at home, most of all not feeling heard...dad's illness and anger seem to be centre stage and SAM becoming aware of why he is so angry (in our sessions)
 - I am feeling/seeing that anger and shame appears to underlie the depression and the OCD...he seems to get angry, squashes it (represses it) and I am inferring/assuming that depression and anxiety is what he uses to 'keep it down'
 - NB – link between anger, shame, worry and OCD and depression
 - A UK [study](#) from 2013 suggested that going inward and turning our anger on ourselves contributes to the severity of depression. (The role of Dependency and Self-Criticism in the relationship between anger and depression [RudyAbi-Habib^aPatrickLuyten^{ab}](#) <https://doi.org/10.1016/j.paid.2013.07.466>)
 - Maladaptive anger, on the other hand, affects us negatively. For one thing, it can contribute to feeling victimized, sulky, or stuck in a feeling of being wronged. Examples of maladaptive anger turned inward can include feeling overly critical toward ourselves, hating ourselves, or seeing ourselves as powerless, pathetic, or helpless. The generally dysfunctional responses that result from maladaptive anger are based on emotional schema from [traumatic](#) experiences in our past. Often, our critical [inner voice](#) is at the root of maladaptive anger, driving us to remain in a state of frustration and suffering.
- used the session to hear mom and allow SAM to express himself honestly to mom. Aim was for his experience and feelings to be acknowledged
- mom's view is quite dominant...what she says goes...she thinks she hears him and is supportive but she is also quite closed to hearing his view and understanding it fully
- Said that other son is threatening suicide and why can't children fight the feelings of depression etc. in her day, they just had to cope...lots of messages about SAM not "fighting" the depression (I said he is 'fighting' in that he is trying to overcome the depression and ocd;
- EF note: he is fighting the depression through the OCD; trying to control the anger as well bec he is the peace keeper
 - less is more, less is best...don't have to rescue
- I also said that 'getting on with it' can definitely lead to repression and ocd and increase the depression)
- Mom appears very stretched – challenging job, tired, husband ill, feels for him, other sons
 - I explained the complexity of a teenager's life today...constant comparisons through social media, constant sense of not being enough...
- my perception is that mom is his 'ally' in the house...he is trying hard to please her, keep her happy and ok with him but she is also very dominant in her point of view and doesn't always see him/his point of view as valid

- minimal repair in the relationships ie. saying sorry for behaviour and getting close again...lots of anger and depression
- made me aware, though of how much goes into the therapy session:
- re. Bronfenbrenner's "systems" and the need to get insight into many of them and for SAM to gain self insight
- Re. SE and where it fits in with my study
 - it isn't just about SE in the sessions...need to make that clear in thesis...
 - family context: ongoing influence of dad, his personality, his illness, effect on the family, other brothers (their criticism, J's depression and OCD), mom's conflicted roles
 - genetics: unknown but definite: dad is anxious and depressed
 - parenting: dad's critical (authoritarian?) relationship but also tries (guilt?), other brothers alienated from dad but living in same house
 - school: SAM very demotivated...a lot of work
 - school and achievement pressure: definitely self-esteem linked to marks - lots of achievement pressure in the home (brothers got 7 distinctions...very bright in maths and science...SAM expectations of himself)
 - social issues and social status: his issues with girls, feels very inadequate around girls
 - emotions: anxiety, anger...ocd and depression
- SAM- discuss anger and not claiming the anger
 - NB - what part of him does he think is angry...explore
 - connect through the body with the anger
- releasing the anger so that he can express it, find a voice,
- SAM: OCD of not changing luck is part that is trying to keep his world safe in an inconsistent 'universe' (dad's inconsistent, erratic, sudden rages)
- create islands of safety in his sense of his body (and gradually move towards fear of being out of control)

EF supervision

26 July 2018

- I don't think it is only about the trauma...maybe also about anxiety and trust – trust of self (including self acceptance) through embodiment...learning to trust oneself, to acknowledge the feelings and touch them
- OCD is often relational with attachment issues (dysregulated parents)
 - thesis topic: SE with adolescents with anxiety – refining
 - if we focus on the relational trauma, does the ocd resolve?
 - not trusting the world and the self, maybe being fearful (like trauma), takes one out of oneself...separates us from our source
- Transformation on a personal level
- OCD is a symptom – the issue is what lies underneath all of that
- challenging relationships
- multiple factors
- conflicted relationships

- double bind
- SAM – spurts of anger, control of anger, internalization has lead to depression and ocd, with anger comes its friend sadness, and guilt (re. dad)

hyperfocus of ocd...getting them to orientate to the room

- EF: when client isn't connecting with the emotion: stop them and focus on getting them to put the feeling into the words...ie. when to amplify
- AB: dissociation from anger with sam...
- SE: titration...a drop at a time...
 - can sometimes be associated with images or metaphors
 - story behind the images
- risk is taking a man to the emotions too quickly...hard to cry with a female therapist...relational safety so that they can touch the emotion (cry)
- crying is the opposite of control
- underneath anger is sadness (AB)
- intellectualized the emotion in order to prevent going there

