Trauma Survivors' Experiences of Kundalini Yoga in Fostering Post-Traumatic Growth

By

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DECLARATION

I, Karlita Morrison, hereby confirm that this study is my own original work. I have not submitted this study at any institution in recognition for a qualification.

I further confirm that I:

- Did not falsify or fabricate any of the data
- Adhered to professional and ethical standards
- Declare that to the best of my knowledge, all sources have been acknowledged and no plagiarism occurred
- A similarity report was generated (Appendix J)
- Share no conflict of interest in this study and has no personal connection to neither the participants nor the site
- Declare that this study was supervised and signed off as complete
- Declare that this study was language edited (Appendix I)

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ABSTRACT

The prevalence of potential traumatic events in South Africa has been found to be eminently high (de la Porte & Davids, 2016). This is due to a history of political violence and an ongoing tendency of interpersonal, community-based, socio-economic violence (Atwoli et al., 2013). Exposure to trauma challenges one's previous assumptions on conceptions of predictability and contest preconceived views of the world (Tedeschi & Blevins, 2015). After trauma-exposure, individuals attempt to conceptualise the event and engage in cognitive processes to reconstruct their assumptive world and recover from trauma (Cann et al., 2011). The physiological effects of trauma are illuminated by drawing on Stephen Porges's polyvagal theory (PVT) (Porges, 2011).

Recent shifts literature has begun to emphasise the potential to perceive benefits and growth following exposure to trauma which is referred to as post-traumatic growth (PTG) (Tedeschi & Kilmer, 2005). Conventional therapeutic techniques like cognitive behavioural therapy and psychodynamic interventions have been found to support trauma survivors in South Africa (Kaminer & Eagle, 2017). However, the lack of professionals trained in these approaches are extremely limited and alternative methods needs to be explored on, especially those that can be delivered in a group setting by a non-professional (Bruckner et al., 2011; Mendelhall et al., as cited in Kaminer & Eagle, 2017).

This generic qualitative study design was implemented to enquire about trauma survivors' experiences of Kundalini yoga (KY) in the promotion of PTG. The seven participants were identified through a non-profit organisation in Alexandra, that is a densely populated township known for high rates of unemployment and crime in Johannesburg (Crime Stats SA, 2018; Ebrahim, 2019). The data was collected in the form of individual semi-structured interviews after which thematic analysis was implemented to interpret the participants' experiences.

All the participants confirmed that KY has been beneficial in fostering PTG on different domains of functioning. The researcher categorised these domains in five main themes namely gratitude, interpersonal relationships, personal strengths, recognising new possibilities and spiritual change. The PVT was used to describe the neurological shifts that were initiated by the practices of KY to highlight the physiological changes that fostered PTG.

Literature on the use of yoga practices to support trauma survivors are limited while most studies have been implemented in the United States of America (Price et al., 2017; Rousseau & Cook-Cottone, 2018; Sullivan et. al., 2018). Therefore, this study contributes to the use of non-conventional approaches to support trauma in the local and global context. Furthermore, it confirmed that KY can be implemented across cultural groups and different socio-economical backgrounds.

Overall, the results of this study are valuable to the body of knowledge on non-conventional therapies, evidence supporting the use of KY to foster PTG, and the efficacy of such an intervention across cultural groups and different socio-economic backgrounds.

KEY WORDS

Kundalini Yoga, Post-Traumatic Growth, Polyvagal Theory, South Africa

CHAPTER 1

Introduction and Background to the Study

Trauma

Traumatic experiences can be described as events that challenge one's previous assumption on conceptions of predictability (Janoss-Bulman, as cited in Tedeschi & Blevins, 2015). These experiences contest an individual's preconceived views and assumptions of the world (Tedeschi & Blevins, 2015). One's assumptive world consists of a wide set of central beliefs related to expectations of other people's behaviour and predictability of events. These expectations provide a sense of safety and structure due to its foreseeable nature (Cann et al., 2010).

According to the U.S. Department of Health and Human Services (2014), traumatic events challenge people's sense of safety by disrupting it and initiating negative alterations of cognitive patterns related to the self, others, the world, and the future. After such an event, individuals tend to view themselves as incompetent or damaged. They also form the idea that the world and others are unpredictable and unsafe. Lastly, they perceive the future as hopeless and come to believe that personal suffering and negative outcomes are never-ending. These negative alterations of cognitive functioning cause reactions that lead to psychological stress.

Common initial reactions to a traumatic event include "exhaustion, confusion, sadness, anxiety, agitation, numbness, dissociation, confusion, physical arousal and blunted effect" (U.S. Department of Health and Human Services, 2014, p. 61). These responses are to be expected and regarded as socially acceptable following exposure to trauma. However, more severe responses that include continuous distress, dissociation symptoms, and intense intrusive recollections that continue despite a return to safety call for treatment. Trauma survivors can also experience a delayed response which is identified through "persistent

fatigue, sleep disorders, nightmares, fear of recurrence, anxiety focused on flashbacks, depression, and avoidance of emotions, sensations, or activities that are associated with the trauma" (U.S. Department of Health and Human Services, 2014, p. 61).

Exposure to trauma can result in several psychological conditions such as post-traumatic stress disorder (PTSD), acute stress disorder (ASD), and bereavement-related disorder (BRD; Lowe et al., 2015). Lowe et al. (2015) stress that although not all trauma survivors proceed to develop these disorders, a vast amount does. The authors continue to emphasise that these survivors are at a higher risk of developing other mental health conditions like anxiety disorders, substance abuse, and major depression.

Trauma initiates a series of cognitive processes by which individuals attempt to conceptualise the event and reconstruct their assumptive world (Cann et al., 2011). These cognitive processes can also be referred to as ruminations. Ruminations can either be deliberative or intrusive by nature. Deliberative ruminations are voluntary and controlled cognitive processes. These processes require a certain amount of effort endorsed with the intention of reconceptualising stressful circumstances to make them meaningful and support growth (Tedeschi & Blevins, 2015). Intrusive ruminations refer to unexpected thoughts that appear in the consciousness without warning. They are usually negative in nature and cause anxiety, distress, and loss of focus and concentration. Intrusive ruminations are an expected outcome following a traumatic event. They are involuntary, and should they continue for an extended period of time without treatment, lead to undesired and unpleasant behavioural reactions resembling what was experienced in the actual traumatic event (Tedeschi & Blevins, 2015).

Current Intervention for Trauma

Early interventions for trauma mostly entail exposure-based therapies (Foa et al., as cited in Bryant, 2015). According to substantial research, the following therapeutic

techniques have been found to be effective for treatment of trauma survivors: trauma-focused cognitive behavioural therapy (CBT); eye movement desensitisation and reprocessing (EMDR; Foa et al., as cited in Kaminer et al., 2018); prolonged exposure (PE) therapy; cognitive processing theory (Galovski et al., 2015); narrative exposure therapy (Elbert et al., 2015); brief eclectic psychotherapy (Gerson et al., 2015); and STAIR narrative therapy (Cloitre & Schmidt, 2015). These approaches will be explored further in the literature review chapter of this study.

Recent shifts in the academic and medical domains have begun to emphasise the potential to perceive benefits and growth following exposure to trauma (Tedeschi & Kilmer, 2005). This encourages alternative logical investigations of individuals who not only recover from trauma but use their experiences to foster post-traumatic growth (PTG), personal development, and resilience (Tedeschi et al., as cited in Tedeschi & Blevins, 2015). It is believed that the cognitive processes following exposure to a traumatic event entail and re-establish a new set of assumptions, which assists PTG (Cann et al., 2010).

Post-Traumatic Growth

PTG as a construct first appeared in scientific papers in the mid-90s (Tedeschi et al., 2018). PTG refers to positive psychological progress that a trauma survivor can experience after exposure to a traumatic event or highly challenging life circumstances (Tedeschi & Blevins, 2015; Tedeschi et al., 2018). PTG is therefore "activated" through a disruption in one's assumptive world and core beliefs. Furthermore, it can be regarded as a cluster of benefits resulting from a combination of emotional, cognitive, and social processes that can be stimulated by a traumatic event (Tedeschi & Blevins, 2015).

PTG has been found in individuals who were exposed to different types of trauma (Joseph, as cited in Vázquez et al., 2014). Vázquez et al. (2014) noted this growth in

individuals who were exposed to natural disasters, cancer, community violence, terrorist attacks, and sexual assault.

It is important to note that PTG emphasises beneficial changes that occur subsequent to an event and not the reactions during or immediately after exposure. During a traumatic experience or immediately after, people tend to act instinctively which is not a determining factor of growth. Instead, PTG entails progress that occurs after careful consideration and reflection of the traumatic event (Vázquez et al., 2014).

Tedeschi et al. (2018) differentiate this progress from resilience in that the latter involves returning to baseline functioning that was used as a framework for functioning before the traumatic event, whereas growth initiates new ways of feeling, thinking, and behaving because the cognitive alterations, caused by trauma, do not allow a return to baseline functioning.

Mind-Body Therapies

The desired goal of trauma treatment is to transform intrusive ruminations to deliberative ruminations in order to gain a better sense of control over cognitive processes (Cann et al., 2011). This process is by no means linear; however, the repetitive nature of mindful reappraisal and shifting has been found to support and mobilise the desired modification to deliberative rumination (Tedeschi & Blevins, 2015). Clinicians who specialise in the treatment of trauma have noted that trauma survivors often feel detached from their bodies and have found that mind-body therapy is a useful component to improve self-regulation and enhance the connection between body and mind (Rhodes, 2015).

Mind-body practices comprise physical bodily activities in collaboration with mindfulness. Mindfulness practices take the form of a meta-cognitive stance which enables one to observe thoughts while engaging in a process of thinking which facilitates rational thoughts needed for the development of PTG. These practices create a platform where an

individual can engage directly with his/her thoughts and emotions while observing higher-order awareness from a non-judgmental perspective. These repetitive processes decrease the intensity of an undesired reaction or thought. It helps one to take a step back and detach from an experience (Tedeschi & Blevins, 2015).

Yoga and Tai Chi are two different forms of mindfulness practices that use physical motions to serve as vehicles for the development of attention and awareness (Tedeschi & Blevins, 2015). Yoga, which entails a component of mindfulness practice as well as physical influences, is an example of an embodied practice that offers tools to help with the negotiation of emotional reactions and triggers, as well as stress. These tools include guided imagery, relaxation training, and breathing re-education. Overall, support programmes involving embodied practices and mindfulness assist trauma clients to convey stressors and symptoms that arise following exposure to a traumatic event; thus, advancing daily functioning and wellbeing (Rousseau & Cook-Cottone, 2018).

Yoga

Drawing on the intentions and paradigms of yoga practice, it can be regarded as a useful supplementary therapeutic technique to assist trauma survivors to work through undesired psychological triggers. Sullivan et al. (2018) describe yoga practice as a "self-regulating, complementary and integrative healthcare (CIH) practice" (p. 1).

Yoga practice is concerned with the integration of top-down and bottom-up processes facilitating bidirectional communication between the brain and the body. These processes influence the functioning of the hypothalamic-pituitary axis (HPS) and the sympathetic nervous system (SNS) which modulate the immune system and emotional well-being. Top-down processes refer to regulation of attention and setting of attention which have been found to decrease psychological stress. Bottom-up processes promoted by breathing techniques and movement have been found to influence cardiovascular and nervous system function to

improve immune function and emotional well-being (Muehsam et al., as cited in Sullivan et al., 2018; Taylor et al., 2010).

Through the top-down and bottom-up processes, yoga facilitates the emergence of physiological, emotional, and behavioural characteristics for the promotion of self-regulation and resilience. Self-regulation is the conscious ability to maintain stability of the system by altering responses to threat or adversity and can reduce symptoms of PTSD and other trauma-related symptoms (Muehsam et al., as cited in Sullivan et al., 2018; Taylor et al., 2010). Resilience includes the ability to "bounce back" and adapt in response to adversity and/or stressful situations (Haase et al., as cited in Sullivan et al., 2018). Higher resilience, related to PTG, also correlated with less perceived stress and better recovery from trauma (Resnick et al., as cited in Sullivan et al., 2018).

There is a wide variety of yoga practices, each existing within a specific paradigm and focus; however, only Kundalini yoga (KY) will be explored on further in this study.

Kundalini Yoga

KY is described as the "yoga of awareness" and is designed to create a deeper understanding of one's emotions. The focus of this practice is to harness the mental, physical, and nervous systems and bring them under the practitioner's control. It brings harmony to the body, mind, and soul by balancing the glandular system, strengthening the nervous system, expanding lung capacity, and purifying the blood. A Kundalini class follows a sequence containing six phases: 1) tuning in with mantras, 2) warm-up, 3) yoga-set including postures, breath, and mantras, 4) relaxation, 5) meditation, 6) prayers and mantra at the end of class (Tarlton, 2020). A noteworthy randomised controlled trial emphasised the significant improvement made by trauma survivors who completed a Kundalini yoga-focused programme. More specifically, they indicated less post-traumatic stress disorder symptomatology and positive changes in perceived stress, anxiety, and resilience (Mitchell et

al., 2014). The efficacy of KY has been well noted in literature on alternative treatment for trauma survivors (Jindani et al., 2015).

Rationale of the Study

The prevalence of potential traumatic events in South Africa has been confirmed to be very high (de la Porte & Davids, 2016). Due to a history of political violence and an ongoing tendency of interpersonal, community-based, socio-economic violence, the general population in South Africa is at a high risk of being exposed to a traumatic event (Atwoli et al., 2013).

The South African Stress and Health study that was carried out between 2003 and 2004 assessed lifetime occurrence of 27 potential traumatic events. They grouped these events into eight categories: 1) war events, 2) physical violence, 3) sexual violence, 4) accidents, 5) unexpected death of loved one, 6) network events, 7) witnessing trauma occurring to others, 8) other.

Atwoli et al. (2013) used the inventory implemented in the 2003 study in 2013 and found that over 70% of South Africans have been exposed to a potential traumatic event (PTE). More specifically, they found that the unexpected death of a loved one and witnessing or seeing a dead body or someone getting hurt accounted for two fifths of all the reported PTEs (Atwoli et al., 2013). Other traumatic events with high frequencies were threat to one's own life as a result of physical violence, criminal victimisation, and intimate-partner abuse. Statistics on crime and violence have verified South Africa as a violent country where communities are confronted with crime and violence daily (de la Porte & Davids, 2016).

Since the late 1990s, South Africa presented one of the highest armed robbery rates worldwide (Kaminer & Eagle, 2010). Compared to other countries, it was found that robberies taking place in South Africa are more likely to involve the use of weapons like knives and pistols. In economically developed countries, the prevalence of the use of a

firearm during robberies is 20%, while it is more than 80% in South Africa. The present-day high rates of violent crime in this country have turned it into a very rich and diverse context to study trauma (Kaminer & Eagle, 2010).

Evidently, a wide variety of trauma-based treatments is available to clinicians across the globe and is accessible and implementable, at least to a certain extent, in various settings. In South Africa, most literature supports the use of cognitive behavioural therapy and psychodynamic therapy to treat trauma-related disorders (Kaminer & Eagle, 2017).

Additionally, Mendelhall et al. (as cited in Kaminer & Eagle, 2017) argue that contexts with limited access to resources, specifically mental health services (Bruckner et al., 2011), like South Africa, should consider approaches that allow treatment to be delivered at the community level by non-professionals. Evidence based on alternative treatments like body-oriented approaches, meditation, and mindfulness has also emerged in literature, as noted by Cloitre (as cited in Kaminer & Eagle, 2017). After an extensive investigation into current treatment effectiveness of alternative approaches, it is clear that very little literature is available that validates the effectiveness of these methods (Sullivan et al., 2018). Possible explanations for the limited evidence available were identified by Sullivan et al. (2018) as 1) poor reporting and 2) lack of acceptance and understanding of the neurophysiological mechanisms of yoga. This study can therefore contribute to the body of evidence-based literature locally as well as globally.

Body-orientated approaches like yoga can easily be served at community level without a professional trained in counselling. Additionally, a big group of people can be served in one session as yoga can be practised in large groups.

Drawing on a study conducted in Kenya, known as the *Trauma Informed Mind Body programme*, an Asana yoga practice was well received by the participants. They concluded that it is an effective tool to foster “emotional insight”, a deeper “connection to body

sensations, emotions and self", as well as "empowerment", among other healing effects (Rousseau & Cook-Cottone, 2018, p. 58).

Research on the effectiveness of yoga and mindfulness practices have, for the most part, been conducted in the United States of America where it was found to be successful in reducing the impacts of trauma and other stressors (Rousseau & Cook-Cottone, 2018). Yoga is among the most widely used complementary healthcare treatments for post-traumatic stress disorder (PTSD; Price et al., 2017). More specifically, literature emphasises the efficacy of using KY, as it was found to reduce symptoms of PTSD and increase overall wellbeing (Jindani et al., 2015; Mitchell et al., 2014). Due to the major gaps in documented knowledge regarding alternative methods like yoga and mindfulness, in South Africa, it would be valuable for such a cost-effective method to be explored (Kaminer & Eagle, 2010).

The researcher found an organisation that provides KY classes and teacher trainings in an informal settlement, also referred to as a township, in the city of Johannesburg in South Africa called Alexandra. This township is densely populated and faces lack of housing and development, poor service delivery, and high rates of unemployment (Ebrahim, 2019). It covers an area of 800 ha and was designed to accommodate a population of 70 000 people. However, current estimates suggest that the population ranges between 180 000 to 750 000, which makes it an awfully densely populated area (The World Bank Group, n.d.). According to statistics released on reported crimes in South Africa, Alexandra was amongst the top ten highest precincts in Johannesburg with regard to murder, sexual offences, attempted murder, common assault, illegal possession of firearms and ammunition, rape, and attempted sexual offences, clearly marking it as a high-crime area (Crime Stats SA, 2018). It is evident that the population of Alexandra is exposed to a high frequency of trauma.

Although the positive influence of the abovementioned Kundalini yoga programme in Alexandra has been reported, no formal studies have been implemented to explore the

valuable aspects of this programme on trauma survivors' experiences of PTG (Yoga 4 Alex, 2019). Therefore, the scientific value of such a study would add to the body of trauma research on alternative interventions in South Africa. More specifically, it would contribute to the understanding of the response of trauma survivors to KY and its facilitation of PTG.

Problem Statement

People from all ages are exposed to a high burden of trauma in South Africa, and while conventional psychotherapy is of value, it is highly specialised, and resources are limited. It was found that there are only 1.58 mental health practitioners per 100 000 people in South Africa, which highlights the unavailability of counselling for trauma survivors (Bruckner et al., 2011). Given the excessive exposure to trauma experienced by the South African population, there is a dire need for trauma-informed support, especially in disadvantaged communities which are excluded from specialised counselling services (Williams & Erlank, 2019).

Additionally, there is a gap in research on using mind-body interventions to support trauma survivors which might serve as a valuable tool of support, especially in communities with limited access to conventional treatment.

Aims and Objectives of the Research Problem

The aim of this study is to explore a Kundalini yoga practice in the fostering of post-traumatic growth.

Research Questions

What are trauma survivors' experiences of Kundalini yoga in fostering post-traumatic growth?

Research Approach and Methodology

Research Design

The study will follow a generic qualitative design to gain a sound understanding of the participants' lived experience (Whittemore & Melkus, 2008). This study will follow a constructivist approach in that it aims to understand participants' lived experiences of KY. Constructivism assumes that humans are conscious and self-aware and therefore able to give an accurate account of their experiences (Chilisa & Kawulich, 2012). More specifically, this study will take on the ontological position of metaphysical subjectivism, which claims that human perceptions and what we experience through our senses are regarded as the truth. In other words, reality consists of what is perceived by an individual (Wills, 2007). The truth, in this study, is sought for in the participants' lived experiences of KY.

Methods

The Adverse Childhood Experience (ACE) measurement tool will be used to determine the extent of exposure to traumatic events. The ACE is easily accessible in PDF form online and measures exposure to 10 types of childhood trauma related to personal and physical abuse, verbal abuse, sexual abuse, physical and emotional neglect, alcoholism, domestic violence, family member in jail, mental illnesses in the family, and loss of parent (Anda & Felitti, 2003). Participants are required to indicate the applicability of each statement to their own situation. However, the ACE will be modified for the purpose of this study to allow the participants to not only report on events in the first 18 years of their life, but their whole lifespan.

This measuring tool was designed to describe the long-term relationship of childhood experiences to health and medical problems later on in life (Felitti et al., 1998). This questionnaire is still utilised today and is found easily administrable and well understood by participants. However, it was found that the full capacity of the participants' accounts was not

always reported through the specific use of words in the questionnaire (Koita et al., 2018) For the purpose of this study, further information was elicited through the means of semi-structured interviews. Furthermore, the PTGI–SF was adapted in two ways to serve the objective of this research enquiry. Due to the explorative nature of the study, the researcher eliminated the Likert scale from the questionnaire because the interest is not in whether they agree or disagree with the statement, but rather what the statement meant for them and what effect KYP had on their response.

The Post-Traumatic Growth Inventory – Short Form (PTGI–SF), created by Tedeschi and Calhoun in 1996, was used to measure PTG in the participants of this study. This inventory contains 10 statements and elicits data on five themes that have been found to foster PTG, namely: “new possibilities; personal strengths; appreciation of life; spiritual/existential change; and relating to others” (Tedeschi & Blevins, 2015, p. 373). In the present study, the researcher modified the inventory in two ways. Due to the explorative nature of the study, the Likert scale was eliminated and instead of reading “as a result of the crisis” the researcher read “experiencing change as a result of Kundalini yoga”. Two closed-ended questions relating to the participants’ degree of involvement in the practice with regard to intensity and duration were added to the PTGI. This questionnaire was merely used as a guideline for structuring the semi-structured interview with each participant.

The PTGI–SF is used extensively and was developed in a Western context. However, it has been translated, modified, and utilised in a wide variety of contexts across cultures, supporting the foundation of its psychometric properties (García & Wlodarczyk, 2015; Heidarzadeh et al., 2017; Weiss & Berger, 2006). Otto (2019) investigated the inventory’s ability to yield results that are valid and reliable in the South African context, providing support for its use in a local context.

Both data collection tools were used qualitatively in this study where the researcher used data from the questionnaires as a framework for further exploration in a semi-structured interview with each participant. These interviews occurred on a one-on-one basis between the researcher and participant. Due to the explorative nature of the study, a semi-structured interview is considered an appropriate tool since it allows the interviewee to diverge in order to explore a response given in the ACE and PTGI–SF in further detail. The flexibility of this approach allows for elaboration of important information about the participants' experiences which may not have been included as a theme in the ACE or PTGI–SF (Gill et al., 2008). However, it is important to recognise the disadvantages of using a semi-structured interview. Denscombe (as cited in Newton, 2010) emphasises the interviewer effect, described as interviewees' different responses depending on how they perceive the interviewer. Gomm (as cited in Newton, 2010) also found that the interviewees' responses might be influenced by what they think the situation requires. Therefore, it is paramount to establish the purpose of the study and put the interviewee at ease (Newton, 2010).

These sessions were recorded on an audio recorder to maintain anonymity and for capturing data that was transcribed afterwards. Every participant was subjected to one interview session and one feedback session. The feedback session was used as a co-creation session where the researcher confirmed the conclusions drawn from the interviews.

Sampling Techniques

This study employed purposeful sampling to ensure maximum understanding of the group's experiences. More specifically, homogeneous sampling was implemented, and participation was sought from a group of adults who have experienced trauma and were practising KY in Johannesburg, South Africa, at the time of the study.

Sample Group

The sample group of seven adults all originate from Alexandra and have already been identified based on their involvement in a KYP. These seven adults, who have been exposed to traumatic events growing up in the township, started practising KY through a non-profit organisation that offered these classes in the area. They were all involved at the organisation at the time of the study and had recently completed their KY teacher's training course.

This sample is easily accessible to the researcher due to the researcher's proximity to the research site and fit the criteria of inclusion which relate to the objective of the research. Inclusion criteria for this study participation were adults from a resource-limited area who were exposed to traumatic events and were practising KY on a regular basis in Johannesburg, South Africa. Individuals of any gender, race, and cultural background were allowed to participate in the study. Exclusion criteria were limited to individuals who were not exposed to trauma, did not practise KY, and were under 18 years of age.

Data Analysis

The ACE was used to determine the extent of trauma that the participants have been exposed to. This data was used as background information by the researcher when she prepared for the semi-structured interviews. The raw data from the semi-structured interviews was categorised by reviewing the audio recordings of the interviews for responses on themes relating to PTG. This study complies with horizontalisation, where all relevant statements made by the participants, also referred to as horizons, were listed. Irrelevant statements, as well as those that are outside the scope of the research objective, repetitive, or overlapping, were excluded. Subsequently, the researcher clustered the horizons into themes. The translated data was reduced in such a way that each theme has one meaning, also known as textural language. Thematic clustering was implemented to identify the constant constructs which would serve as the major themes (Yüksel & Yildirim, 2015). The clustered data was

then indexed along the nature of the responses given and the intensity with which they were expressed (Kienzler & Pedersen, 2014).

The textural description serves as a narrative explaining the participants' perceptions of a KYP in fostering PTG. The researcher elaborated on the meaning units in a narrative format including verbatim quotes from the interviews to facilitate the understanding of the participants' experiences (Yüksel & Yildirim, 2015). Ultimately, the researcher concluded on the value of a KYP in nurturing PTG in trauma survivors.

Research Process

Permission for this study was sought from the Ethics Committee of the Faculty of Education at the University of Johannesburg. After permission had been given by the committee, consent was sought from the founder and manager of the non-profit organisation. After their consent was given, the researcher approached the sample group in the form of an arranged information session wherein the nature of study was clarified fully, and voluntary participation requested. Participants who were willing to partake in the process were able to collect an intake form from the researcher. Information regarding the purpose and methods used in the study, possible risks, and expectations were made clear in the information session and a consent sheet was made available to the prospective participants.

The intake form required biographical information as well as an indication of the most suitable time and location for them to complete the ACE questionnaire and PTGI–SF. Each participant was only required for two contact sessions with the researcher. The first session was scheduled for 1 hour and consisted of the completion of both questionnaires and the interview following directly afterwards. The second session served as the feedback session and took 20 minutes.

Quality Criteria

Credibility

Credibility refers to the extent to which the findings represent the participants' true experiences and whether the researcher's interpretations of the data are sound and accurate (Korstjens & Moser, 2018). Member checking and peer debriefing with other researchers are techniques used to improve credibility (Korstjens & Moser, 2018; Treharne & Riggs, 2015). The researcher implemented member checking through feedback sessions with each participant to scrutinise her interpretations of their experiences before drawing up the final conclusions. The researcher also engaged in debriefing sessions with her research supervisor to analyse her interpretations of the participants' experiences.

Research Bias

By using a semi-structured interview, the researcher interpreted the participants' experiences of KY. Since the researcher was involved in making meaning of the participants' experiences, her views and understandings form part of what is regarded as the truth in the presented data. Drawing on the constructivist approach and an emphasis on the subjectivity of knowledge, the researcher also needed to be aware that her social inquiry and interpretations would be influenced by her values and perspectives (Chilisa & Kawulich, 2012). The researcher's neutrality might have been hindered in that she expected the participants to benefit from yoga, and therefore used "bracketing" as a technique to scrutinise her own assumptions and investment in the data (Willig & Stainton Rogers, 2017). More specifically, she used reflexive journaling as a bracketing technique to distinguish whether an idea belonged to her or to the participant (Tufford & Newman, 2010).

Transferability

According to Treharne and Riggs (2015), transferability refers to the extent to which the findings are applicable to other contexts. In-depth/rich descriptions of participants'

responses contribute to transferability as one provides other researchers with enough information for them to decide whether the data is transferable to their setting (Korstjens & Moser, 2018; Treharne & Riggs, 2015). In this particular study, narrative accounts of the participants' experiences were provided by the researcher, ensuring for rich descriptions of the data. Bitsch (as cited in Anney, 2014) claims that thick descriptions of all the research processes, from data collection and the context of the study to the production of the final report, are paramount for transferability. The researcher paid close attention to provide the reader with detailed accounts of the methodology of the study. Not only did the researcher focus on the practice-related data, but she also gave a thorough description of the environmental context of the study, as it contributed to the comprehensiveness of the data (Korstjens & Moser, 2018). Bitsch (as cited in Anney, 2014) also emphasises the efficacy of using purposeful sampling, because it provides in-depth findings. Purposeful sampling was implemented in this study, which contributed to the transferability.

According to Chilisa and Preece (as cited in Anney, 2014), stepwise replication is a data evaluation procedure where more than one researcher analyse the same dataset independently and compare the results. This is frequently used to determine transferability, because it is expected for the two, or more, researchers to reach the same conclusions. However, this technique was not implemented in this study, and is recommended for future studies. This study aims to contribute to the body of knowledge on KY and provide recommendations for future studies.

Confirmability

Confirmability sheds light on the researcher's biases and motivations. Confirmability is compromised when a researcher's perspectives overshadow the participant's experiences (Treharne & Riggs, 2015). Thus, it will obstruct the possibility of another researcher performing the same study to reach the same conclusion (Korstjens & Moser, 2018).

According to Korstjens and Moser (2018), it is valuable to document the research process carefully and comprehensively. This includes documenting meetings, “materials adopted”, and “emergence of the findings and information about the data management” (Korstens & Moser, 2018, p. 122). The researcher kept a personal diary to document her reflective thoughts and motivations throughout the practical part of the research, and to be more aware of her own perspectives. The use of the reflective journal further supported the researcher to remain flexible in her approach and not mould the data to fit her own ideals.

Ethical Considerations

Ethical Clearance

The Health Professions Act of 1947 (Department of Health, 2006) Code of Ethics requires that institutional approval be obtained in order to conduct research. The researcher completed the University of Johannesburg’s Ethical Clearance Application Form, Sections A and B. According to the University of Johannesburg (2006) Code of Ethics, section 7.1, when research participants are people, the research needs to be sent to the academic ethics committee for evaluation and approval. This proposal was sent to the Ethics Committee of the Faculty of Education at the University of Johannesburg for ethical clearance.

Informed Consent to the Research

In the first encounter, the participants met the researcher at a suitable location where informed consent was obtained from all participants prior to participation. Participants were given the power of free choice by informing them that participation is voluntary and that they have the right to withdraw from the study at any given moment during the process. Participants were also informed that they would not receive any compensation for their participation in the research.

Respect for Human Rights and Others

Respect for autonomy. The research process respected the participant as a person and treated them with human dignity. Participation was voluntary, and no one was forced into participation. Respect for participants was also ensured by optimising their time and only collecting data necessary for the objectives of the study. Completed interviews were saved on a flash drive and kept safe where no one other than the researcher had access to it.

Respect for privacy. The privacy of participants is respected at all times, and participants have the right to control the distribution of their personal information. Participants had the right to withhold any personal information if they wished to do so. The participants were also allowed a private personal space during completion of the survey to ensure that no other individual was able to view their responses. The researcher, however, had to be present during completion of the questionnaires but ensured minimal invasion of the participants' personal space during completion of questionnaires. Although participants were encouraged to complete all the questions, they were not forced if they wished not to answer any questions. Participants were also allowed to withdraw during completion of the questionnaire battery if they felt that their privacy has been invaded.

Beneficence. Prior to participation, the benefit of the study was explained to participants. They were informed that participation might have a positive effect on the adverse symptoms they were experiencing after exposure to the traumatic event.

Confidentiality. Confidentiality is ensured by not including any information or data that could expose the participants' identity. Pseudonyms were assigned to participants for discussing their responses to the intervention in the research. However, the participants are known to each other; therefore, anonymity could not be maintained.

Debriefing of Research Participants

Considering that the study required active participation, it could be considered a high risk for participants. If the researcher were to become aware, during the study, that a participant had been harmed, reasonable steps would have been taken to ensure minimisation of harm. These steps included offering immediate discontinuation and referral to a psychologist in the area.

Integrity

Hereby, I, the researcher, commit myself to honesty throughout the research process, adhering to the abovementioned ethical principles and working carefully to prevent errors, which may invalidate the data collected.

Outline of Chapters

Chapter 1 provided a background and rationale, aims, and methodological framework to the study. Chapter 2 presents an in-depth discussion of the literature related to trauma, treatments available for trauma survivors in South Africa, Kundalini yoga, and post-traumatic growth. Chapter 3 elaborates on the methodological framework and explains the selected methods and data collection as well as data analysis and interpretations. Ethical considerations are also discussed in detail. Chapter 4 presents the results from the interviews and thematic analysis from the participants' responses. Chapter 5 includes a discussion of the responses from the interviews and how it relates to the constructs of post-traumatic growth. Chapter 6 summarises the study and provides a reflection on the limitations of the study. Further recommendations for supportive interventions and future studies within a similar context are made.

Conclusion

This chapter described the background on trauma and the rationale for the study. In a broad sense, the chapter looked at definitions of trauma and its underlying cognitive

mechanisms and mentioned the current interventions used to treat trauma. Trauma in South Africa was discussed as well as the current stance of therapies and its functionality and feasibility in South Africa. Alternative therapeutic techniques, like yoga, specifically KY, were discussed and proposed as a feasible intervention to mobilise PTG in communities with low resources and high trauma prevalence in South Africa.

CHAPTER 2

Literature Review

Introduction

Psychological stress caused by trauma is a problem affecting people's lives in different societies across the world. Researchers found that traumatic events do not occur at random but are influenced by community and socio-political factors. Therefore, traumatic events and interventions are contextually bound and should be considered accordingly (Magruder et al., 2017). In this chapter, the researcher will highlight the different events that cause psychological trauma, with specific focus on the nature of traumatic events in the South African context.

The polyvagal theory is used as a theoretical framework to explain the physiological changes caused by trauma and how this knowledge can be used to influence trauma treatment (Sullivan et al., 2018; van der Kolk, 2014). The current interventions and treatment modalities that are available to South African clinicians are critically discussed. As a response to the limitations of conventional therapies, the researcher proposes the use of mind-body interventions, more specifically, Kundalini yoga, to treat trauma survivors in South Africa (Kaminer & Eagle, 2017; Werbalowksy, 2019). Kundalini yoga is described in conjunction with the polyvagal theory to support the argument that such an intervention might not only be successful in relieving psychological stress in the aftermath of trauma but can facilitate post-traumatic growth (Lianchao & Tingting, 2019; van der Kolk, 2014).

Trauma

According to the American Psychiatry Association (Swain et al., 2017), traumatic stress can arise from a variety of incidents, including natural disasters such as earthquakes and flooding, artificial incidents such as motor vehicle accidents, or community violence such as gang or school violence. Other events also known to lead to traumatic stress are physical

abuse, physical neglect, emotional abuse, emotional neglect, sexual abuse, witnessing domestic violence, substance abuse, mental illness, incarceration within the household, and parental separation or divorce. Other stressful events like sudden death in the family or caring for someone with a chronic or incapacitating illness can also cause trauma-related problems. The risk for mental and physical health problems increases with the number of events someone is exposed to (Harvard Health Publishing, 2019).

Trauma in South Africa

Exposure to traumatic events is known to be exceedingly high in South Africa. According to Williams et al. (as cited in Kaminer & Eagle, 2017), around 75% of the general population have experienced trauma. This was confirmed by the South African Stress and Health study conducted between 2003 and 2004 and replicated in 2013 (Atwoli et al., 2013; Suliman & Stein, 2012).

In 2013, Atwoli et al. (2013) used the inventory implemented in the South African Stress and Health study and found that over 70% of South Africans have been exposed to a potential traumatic event (PTE). They found that the unexpected death of a loved one and witnessing or seeing a dead body or someone getting hurt accounted for two fifths of all the reported PTEs. Other traumatic events with high frequencies were threat to one's own life as a result of physical violence, criminal victimisation, and intimate-partner abuse (Atwoli et al., 2016). Williams et al. (as cited in Williams & Erlank, 2019) emphasised that trauma due to crime and violence is particularly prevalent in South Africa as it is considered to be one of the most violent countries across the globe. The United Nations Office on Drugs and Crime (2014) found the South African homicide rate to be significantly high compared to global standards. Furthermore, the Institute of Security Studies reported crime related to assault, rape, and murders with firearms to be extremely high in South Africa (South Africa's official crime statistics for 2013/14; Africa Check, 2014).

It is not only the people directly affected by violent crimes, but also the loved ones of the victims when they learn of the event, adding to the growing number of South Africans traumatised. Additionally, simply living in a community with high violent crime rates increases the risk for indirect traumatisation due to hearing of gunshots, witnessing assaults, and being present in narrative telling of other people's violent experiences (Kaminer & Eagle, 2010). Considering the nature of trauma in the South African context, it came as no surprise that Kaminer and Eagle (2017) found that South Africans are rarely exposed only to a single traumatic event. These events often occur in conjunction with other ongoing life stressors such as "economic deprivation, failures in delivery of basic services such as electricity and water, ongoing community or domestic violence, and living with chronic health conditions such as HIV/AIDS or diabetes" (Kaminer & Eagle, 2017, p. 18).

In an attempt to understand the deep-rooted effects of trauma on its survivors, one needs to comprehend the physiological effects of these traumatic events.

Effects of Trauma

Trauma survivors undergo physiological and neurological shifts that change the way the body responds to threat. According to van der Kolk (2014), trauma survivors perceive the world with a different nervous system than before, usually one that is known for maladaptive functioning. Therefore, traumatic symptoms can be described and understood through the changes that occur in the nervous system and, more specifically, how trauma exposure changes the system's perception of threat. The effect of trauma is widespread and complex and manifests as physical and mental health problems as well as behavioural and emotional challenges (Rhodes, 2015).

Trauma survivors are constantly bombarded by visceral warning signs even in situations where no threat exists. These misinterpretations can either cause hyper-stimulation or hypo-stimulation of the nervous system that initiates a whole-body response that is

incongruent to the internal and external stimuli. According to Levine (as cited in Werbalowksy, 2019), people who have been exposed to a single recent traumatic event tend to be subjected to the sympathetic nervous system's hyper-stimulation, which is associated with elevated secretion of stress hormones. This causes constant inflammation in the body which can lead to various cardiovascular diseases, autoimmune diseases, obesity, and chronic pain syndromes (Harvard Health Publishing, 2019; Rhodes, 2015). Over-secretion can also cause irritability, memory and attention problems, and sleep disorders (Harvard Health Publishing, 2019; van der Kolk, 2014).

On the contrary, exposure to multiple traumatic situations results in hypo-stimulation through the parasympathetic nervous system and is characterised by a sense of numbness and disconnect between the body and mind (Levine, as cited in Werbalowksy, 2019). Trauma has been found to inhibit the basic sense of security and trust in oneself and others which causes a sense of disconnect and insecurity within the body. This is caused by poor interoceptive awareness, maladaptive affect, and poor impulse control (Rhodes, 2015). Our sense of self is anchored in a vital connection with our bodies (Damasio, as cited in van der Kolk, 2014). Trauma survivors encounter extremely intrusive reliving of the traumatic event which leads to a sense of loss of control.

According to Damasio (as cited in van der Kolk, 2014) and Levine (as cited in Werbalowksy, 2019), trauma survivors' inhibited sense of security and trust in themselves not only lead to a disconnect between the body and the mind, but also between themselves and other people and the world around them. This initiates longstanding effects of the traumatic experience and recruits a series of maladaptive behaviours, emotional dysregulation, and distrust and avoidance of people, places, situations, and feelings (Rhodes, 2015).

Ciraulo and Brown (as cited in Jindani & Khalsa, 2015) found that disconnection leads to impaired self-regulation and adaptability that are expressed through spontaneous re-experiencing of the traumatic event, avoidance behaviour, mood disorders, and hyper-arousal. Self-regulation and behavioural flexibility are proposed to be dependent on the accuracy with which we interpret and respond to interoceptive information, with greater accuracy leading to enhanced adaptability, self-regulation, and social engagement (Farb et al., 2015). Trauma survivors' challenge to self-regulate often results in reliance on external regulation, often in the form of substance abuse, reassurance from other, physical outbursts, and compulsive compliance (van der Kolk, 2014).

Furthermore, feelings of detachment and discomfort result in a diminished capacity to be physically, emotionally, and cognitively present in a given moment as trauma survivors fluctuate between a hyper-vigilant state and a hypo-vigilant state. Trauma survivors, consciously or unconsciously, tend to avoid these thoughts, sensations, and emotions (Rhodes, 2015). Levine (as cited in Werbalowksy, 2019) noted that as a response, people become numb in an attempt to avoid overwhelming cues. Avoidance of certain feelings, people, and situations causes a constriction of freedom and a person experiences a loss of vitality and the potential for fulfilment of dreams.

Trauma survivors' tendency to feel stuck in the past has been explained by studying brain scans of people while exposed to stimuli that triggered flashbacks of their suffering. An area known as Brodmann area 19 is a region situated in the visual cortex that registers images when they first enter the brain. Activity in this area lights up when an individual experiences flashbacks, indicating that the images associated with the traumatic event remain vivid and the individual reacts as if the event is occurring for the first time. The activity on the brain scans as well as a sharp increase in heart rate and blood pressure readings show that

activating the sensations like sounds and images related to the traumatic experience activates the body's alarm systems (van der Kolk, 2014).

Trauma survivors also find it challenging to articulate their experiences and feelings into words. A decrease in function in a part of the brain called Broca's area was detected in brain scans of trauma survivors while they were exposed to stimuli that triggered flashbacks. Broca's area is situated in the left frontal lobe and is one of the speech centres of the brain. Without functioning of this area, people find it challenging to articulate their thoughts and feelings in a coherent manner (van der Kolk, 2014).

While exposure to a traumatic event does not always result in mental health problems, a vast amount of people develops disorders like post-traumatic stress disorder (PTSD), anxiety, and depression (Rhodes, 2015).

To provide an even deeper understanding of the effects of trauma, the researcher elucidates the neurological changes of the stress response system, also known as the nervous system. The polyvagal theory will be used to understand the neurological changes of the stress response system.

Theoretical Framework

Stephen Porges, a professor in psychiatry, developed the polyvagal theory (PVT) to explain the neural mechanism through which humans respond to stimuli and negotiate a sense of safety in their internal world (Porges & Carter, 2017). This theory serves as the theoretical framework used to describe human behaviour in response to trauma in the presenting study.

Before, neurologists understood the neural mechanism as consisting of two subsystems known as the sympathetic nervous system and the parasympathetic nervous system. The PVT diverted from this binary approach and included a third distinct and measurable phylogenetic subsystem known as the vagal nerve (Porges & Carter, 2017; Sullivan et al., 2018). To fully grasp the neurological underpinnings of the PVT, it is

important to understand each subsystem's functionality and role within the human response system. Therefore, the researcher elaborates on the PVT, the functioning of the distinct phylogenetic stages, as well as the interaction between three subsystems to ultimately explain the human response to trauma.

Polyvagal Theory – Overview

The polyvagal theory (PVT) was first presented in 1998, to reconceptualise the way we view the autonomic nervous system's response to physiological bodily cues of safety and risk. Porges built his theory on Charles Darwin's observations, as documented around 140 years ago, of the "pneumogastric nerve" which connects numerous organs including the brain, lungs, heart, stomach, and intestines (van der Kolk, 2014). Porges studied the pneumogastric nerve, found it to be an integral part of the human response system, and renamed it the vagal nerve.

This resulted in the development of the PVT, which describes the body's neural mechanism as consisting of two older stages known as the sympathetic nervous system and the parasympathetic nervous system, while the newer subsystem is dictated by the vagal nerve (Sullivan et al., 2018).

Sympathetic Nervous System (SNS)

The SNS originates in the spinal cord and provides the neural pathways for involuntary changes to mobilise fight or flight behaviours. This system initiates physiological changes like increased heart rate and inhibition of the digestive system as well as behavioural responses such as fear or anger which assist with a person's orientation towards safety or protection (Sullivan et al., 2018).

Parasympathetic Nervous System (PNS)

The PNS serves two functions depending on the processing of interoceptive information. When the PNS is recruited as a defence system, it reduces metabolic activity by

reducing heart rate and respiration, leading to the “freeze” response. Secondly, when it is not activated for defence, it supports health, growth, and restoration via neural regulation of the internal organs below the diaphragm. Most of the neural pathways of the PNS travel through and are under the management of the vagal nerve, which is the third subsystem in the neural mechanism of the body’s response to stimuli (Sullivan et al., 2018).

Vagal Nerve

The vagal nerve, also known as the vagus, is the tenth cranial nerve that originates in the brainstem and forms a major component of the automatic nervous system (Kolb & Whishaw, 2009). The vagal nerve is a complex bidirectional system with branches that link the brain and different target organs with each other. The vagus works with other nerves to activate the muscles of the face, throat, middle ear, and voice box or larynx. The nerve functions independently of the spinal cord and therefore autonomously of the SNS.

Within the vagal nerve, we find two distinctive vagal circuits that allow rapid and direct communication between specific organs and brain structures to regulate and maintain homeostasis in the body. The one circuit, which is referred to as the “dorsal vagal nerve”, is phylogenetically older and unmyelinated. This vagal circuit facilitates parasympathetic reactions which results in a passive response entailing decreased muscle tone, dramatic reduction of cardiac output, and bowel and bladder function to reserve metabolic resources. From a behavioural perspective, this state is referred to as immobilisation or the “freeze” response (van der Kolk, 2014).

The second, phylogenetically newer, myelinated system is referred to as the “ventral vagal nerve”. This system relates to organs above the diaphragm such as the lungs and heart to support feelings of safety and positive and engaging social behaviour like smiling, nodding, and showing facial expressions that correspond with the person one is communicating with (van der Kolk, 2014). The vagal tone or vagal control correlates with

contrasting activation in brain regions that regulate responses to threat, interoception, emotional regulation, and the promotion of greater flexibility in response to challenges (Park & Thayer, 2014).

Interaction between Three Subsystems

The PVT explains human behaviour through the interaction between 1) the dorsal vagal nerve which initiates parasympathetic reactions, 2) the ventral vagal nerve which initiates prosocial behaviours, and 3) the SNS stemming from the spinal cord. Because these three neural mechanisms developed in a specific order due to the evolutionary development of the vertebrate autonomic nervous system, it functions in terms of a response hierarchy (Porges & Carter, 2017).

The ventral vagal nerve or ventral vagal complex (VVC) is the first system to be recruited when stimulus is received. The VVC contains neural structures that mediate positive social engagement when safety is detected in the internal and external environment (Sullivan et al., 2018). When the VVC is dominant, the potential for prosocial behaviours and emotional states such as connection, love, and flexible and adaptive responses to environmental challenges is increased. This phenomenon is referred to as the "vagal break" because the VVC inhibits the function of the SNS on the heart rate and puts a break on the heart's pacemaker. Thus, the ability to access the "vagal break" to modulate the visceral state enables the individual to rapidly engage and disengage with objects and other individuals and to promote self-soothing behaviours and calm states (Porges & Carter, 2017). Trauma survivors experience low vagal tone that refers to the depression of the myelinated system, the VVC. By altering vagal control, trauma changes the threat perception system of the brain and, therefore, people's physical reactions are not dictated by the present moment, but by what the present moment triggers from the past (van der Kolk, 2014).

Self-regulation and behavioural flexibility are proposed to be dependent on the accuracy with which we interpret and respond to interoceptive information, with greater accuracy leading to enhanced adaptability, self-regulation, and social engagement (Farb et al., 2015). Therefore, compromised ventral vagal tone causes problems with self-regulation and flexibility, which leads to symptoms discussed earlier in the section like spontaneous re-experiencing of traumatic events, avoidance behaviour, mood disorders, and hyper-arousal (Ciraulo & Brown, as cited in Jindani & Khalsa, 2015). These symptoms occur due to the VVC's inability to implement a vagal break.

Secondly, the SNS is recruited when the VVC has failed to alleviate threat. In turn, the activation of the SNS inhibits the VVC's influence in favour of mobilising resources for rapid action and initiating the fight or flight response. The SNS is initiated by the amygdala, the structure in the brain that identifies whether incoming input is relevant for survival or not. Should a threat be detected, the amygdala sends a message to the hypothalamus and the brain stem, recruiting the stress hormone system and the autonomic nervous system to initiate a whole-body response. While the amygdala is important to ensure human survival, trauma increases the risk of misinterpretation and elevated secretion of stress hormones in the absence of stress (Porges & Carter, 2017).

The third system in the response-hierarchy is the dorsal vagal nerve or dorsal vagal complex (DVC), which is only accessible when the SNS is inhibited (Sullivan et al., 2018). When a trauma survivor's body initiates the biological freeze response via the PNS, they experience a sense of disconnect from the world which can lead to numbness and dissociation from fear. This response is often labelled as depersonalisation. The problem with this manifestation is that the person not only dissociates from threatening triggers, but also from non-threatening, everyday experiences, and disengages from their lives (van der Kolk, 2014).

These three neurological platforms are not limited to isolated functioning but can co-exist and interact to create different behavioural responses. The PVT suggests five global states, also referred to as preparatory sets, that are used to differentiate and explain the neurological organisation from which behaviour stems (Porges, as cited in Sullivan et al., 2018). Table 2.1 presents a summary of the five preparatory sets along with the expressed behaviour (Payne & Crane-Godreau, 2015).

Table 2.1

Preparatory Sets

Neural platform	Behaviour
VVC	Safe immobilisation, social engagement
SNS & VVC	Safe mobilisation, dance, play, artistic expression or writing
SNS	Fight or flight mobilisation
DVC & SNS	Immobility with fear
DVC	Immobility without fear

According to the PVT, humans can recognise and shift the underlying platform of any given psychophysiological state. This may directly affect a person's physiology, emotion, and behaviour, thus helping to cultivate adaptive strategies for regulation and resilience to benefit physical, mental, and social health (Porges, as cited in Sullivan et al., 2018). It is important that these platforms detect and interpret interoceptive information accurately to express an appropriate response that is congruent with internal and external cues. Trauma has an adverse effect on the optimal functioning of the preparatory sets, which results in the wrong platforms being recruited for action. This is characterised by behavioural responses that are incongruent with the internal and external stimuli (Porges & Carter, 2017).

Our knowledge of the alterations in the brain after trauma exposure currently directs the type of treatment offered to trauma survivors. Treatment methods are based on our

comprehension of the neurological shifts caused by trauma and aim to rectify these changes (van der Kolk, 2014).

Trauma Interventions

Globally, randomised controlled trials (RCT) have provided evidence for a wide variety of trauma interventions for trauma survivors (Edwards, 2013). However, their transferability to a South African context remains under-researched. In the present study, the researcher will only discuss the treatment approaches that show evidence of legitimacy and effectiveness in the South African context. These approaches will be categorised into two groups and discussed accordingly to present a clear picture of the underlying physiological working of each group.

Therapeutic interventions aimed to treat trauma are divided into 1) top-down approaches and 2) bottom-up approaches. Top-down approaches are therapeutic modalities that focus on emotional regulation by strengthening the client's cognitive capacity to improve monitoring of the body's sensations (van der Kolk, 2014). In other words, the therapist works from the top, i.e., the client's cognitions, down to alter the client's physiology and nervous system. On the contrary, bottom-up approaches aim to recalibrate the autonomic nervous system to change a client's physiology and their relationship with bodily sensations in order to alter their cognitions (van der Kolk, 2014).

Each approach will be discussed with reference to the therapeutic techniques relevant to the South African context.

Top-Down Approaches

Although top-down therapeutic techniques might diverge in some aspects, all include exposure to traumatic stimuli after which the client and the therapist engage in a dialogue about the event while the client processes the memories of the trauma (van der Kolk, 2014).

The most commonly used top-down therapeutic method in South Africa, with the strongest evidence for effective trauma treatment, is cognitive behavioural therapy (CBT). When applying CBT with a trauma client, this approach is commonly referred to as trauma-focused cognitive behavioural therapy (TF-CBT; Edwards et al., 2012). Bar-Haim et al. (as cited in Kaminer & Eagle, 2017) also found psychodynamic approaches to be quite popular among South African clinicians.

Cognitive behavioural therapy (CBT). CBT focuses on altering the client's thought processes to identify maladaptive patterns that maintain negative emotions and behaviour (American Psychological Association [APA], 2020). This type of therapy entails different components and techniques through which the client's irrational thought processes are brought into consciousness (van der Kolk, 2014). Clients are urged to engage in a narrative where they re-visit the traumatic event and articulate their emotive responses to the event to identify and restructure detrimental thoughts and reduce avoidance. This process is intended to encourage reconceptualisation and understanding of the traumatic experience and the ability to cope with adverse effects. Exposure to the trauma narrative should always rely on what the client chooses to reveal to instil a sense of control, self-confidence, and predictability, and reduce avoidance behaviour by the client. CBT also includes psychoeducation on the effect of trauma on a person. Stress management and anticipating and planning for potential crisis is another component of CBT (APA, 2020). Although the use of CBT for trauma survivors is highly recommended, Bisson (as cited in van der Kolk, 2014) found that studies on the effectiveness of CBT treatment for trauma show a decrease in symptoms, but complete recovery is rarely recorded.

Although TF-CBT has been used widely among local clinicians, the transferability of this approach has been a controversial topic as evidence-based research on its efficacy remains limited. However, local studies have shown that different TF-CBTs give rise to

successful outcomes in South African communities. Several published case studies have suggested that TF-CBT is viable in the local context, although minor adaptations are required. Clinicians are advised to be knowledgeable of the local conditions of their clients to make effective adaptations (Edwards et al., 2012). Drake and Edwards (2012) provided valuable information about the effectiveness of a TF-CBT in a rural context. Their TF-CBT took the form of a flexible approach that included psychoeducation and prolonged exposure to stimuli related to the trauma of the subject. Regardless of the flexible implementation, Drake and Edwards noted that no significant adjustments were required for TF-CBT to be developed and used internationally.

After looking at the literature on the transferability of CBT to South African context, some discrepancies were noted between scholars' convictions of its transferability. Researchers like Edwards et al. (2012) seem convinced that the data found from systemic case studies provides enough evidence that CBT can be transferred without fundamental changes, while others like Kaminer and Eagle (2017) call for more randomised controlled trials to prove the effectiveness of CBT approaches. These discrepancies have yet to be resolved; therefore, the efficacy of TF-CBT interventions cannot be confirmed (Edwards et al., 2012; Kaminer & Eagle, 2017).

Psychodynamic treatment. Since CBT is only intended for short- to medium-term time-limited intervention, South African professionals and community practitioners draw on psychodynamic and multi-dimensional treatment plans when long-term treatment is required (Kaminer & Eagle, 2010). Eagle (2013) found that psychodynamic treatment (PDT) is also implemented in a flexible manner, similar to TF-CBT.

PDT differs from CBT in that it places a greater emphasis on the exploration of the less obvious aspects rather than the conscious trauma-related cognitions. PDT is concerned with a client's personal history and personality because they believe one's unique individual

aspects of response are vital to treatment. Thus, during this type of treatment, the therapist works closely with the client to narrate the traumatic event and evaluate how self-image and other past developmental schemas influence their perspective and reaction to the trauma (Kaminer & Eagle, 2017).

Integrative approach in South Africa. A commonly used integrative approach to trauma treatment in SA is the "Wits trauma model". This approach draws on a range of existing underpinnings of both psychodynamic and cognitive behavioural theory. The Wits trauma model is flexible rather than protocol-based and encompasses five components that can be used interchangeably in different sessions. The five components are "telling and retelling the story, normalisation of symptoms and responses, addressing self-blame or survivor guilt, enhancing mastery and facilitating the creation of meaning" (Kaminer & Eagle, 2010, p. 95).

The Wits trauma model was developed by staff members working at the University of the Witwatersrand. Based on documentation from practitioner and client reports, and trauma-focused service organisations, this model shows to be successful (Kaminer & Eagle, 2010). However, this approach has been criticised for not including a strengths-based component but rather taking a deficit-orientated stance (Fouché & Walker-Williams, 2015).

Limitations of top-down approaches. Although these therapies have proven to be useful in reducing trauma-related symptoms, they fall short in addressing the neurophysiological shifts that affect trauma survivors (Werbalowksy, 2019). Therapeutic models that focus solely on a top-down paradigm tend to bypass the emotional-engagement system and focus instead on recruiting the cognitive capacities of the mind. This ignores the need to engage the safety system of the brain before trying to promote new ways of thinking. While people are hyper-aroused or shut down, they cannot learn from their experience. Primitive parts of the brain that are associated with the shut-down state lack linguistic

representation and enable the language centre, Broca's area, of the brain. Thus, the experience of trauma itself gets in the way of being able to talk about distressing feelings and resolving them. Although words are a valuable tool to express personal experiences, inactivity of Broca's area shows that trauma survivors do not always possess the ability to articulate their experiences (van der Kolk, 2014). Additionally, verbal expression does not "eliminate flashback or improve concentration, stimulate vital involvements in your life or reduce hypersensitivity to disappointments and perceived injuries" (van der Kolk, 2014, p. 194). Regardless of how much insight and understanding we develop through adequate expression of memories and emotions, the rational brain remains unable to talk the emotional brain out of its own reality due to visceral experiences that remain embedded in the body (Ogden et al., as cited in Werbalowksy, 2019; van der Kolk, 2014).

Porges's polyvagal theory along with other studies looking at physiological and neurological changes caused by trauma have evidently caused a shift in how interventions are structured. This is apparent when considering the growing amount of studies on alternative methods to treating trauma (Porges & Carter, 2017; Werbalowksy, 2019). An increasing number of research studies suggests that trauma interventions should include a component that focuses on physiological and neurological dysregulation to improve emotional and cognitive dysregulation caused by trauma. Therefore, a bottom-up approach to trauma intervention that focuses on improving the trauma survivor's interoceptive processes to improve self-regulation is believed to facilitate change not catered for in traditional top-down approaches (Werbalowksy, 2019).

After a thorough investigation on the use of bottom-up approaches to trauma treatment, mind-body interventions are becoming increasingly popular with support from experts in the field such as Berrel van der Kolk, Peter Levine, and Stephen Porges (Payne et al., 2015; Porges & Carter, 2017; van der Kolk, 2014; Werbalowksy, 2019).

Bottom-Up Approaches

The bottom-up approach allows the body to have experiences that deeply and viscerally contradict the helplessness, rage, or collapse that results from trauma (van der Kolk, 2014). Agaibi and Wilson (as cited in Jindani & Khalsa, 2015) suggest that self-regulatory deficits could be the most far-reaching effects of psychological trauma. Recovery from trauma involves the restoration of executive functioning and, with it, self-confidence and the capacity for playfulness and creativity. Trauma survivors are constantly trying to maintain control over unbearable physiological reactions which can result in a whole range of physical symptoms and even diseases. Therefore, it is crucial for trauma treatment to engage the entire organism: body, mind, and brain (van der Kolk, 2014).

Eye movement desensitisation and reprocessing (EMDR) therapy and yoga practices are two bottom-up approaches that have been mentioned in South African literature (Jindani & Khalsa, 2015; Jindani et al., 2015; Kaminer & Eagle, 2017;).

Eye movement desensitisation and reprocessing (EMDR). EMDR is a bottom-up therapeutic model that was developed by psychologist Francine Shapiro to help people deal with painful memories related to traumatic events (APA, 2020; van der Kolk, 2014). This approach is most commonly used in conjunction with CBT to consolidate the positive cognitions and images that were installed through CBT (Kaminer & Eagle, 2017). EMDR is primarily concerned with memories, relating to trauma, that were not adequately processed and continue to cause distress and symptoms of trauma. These memories contain emotions, thoughts, beliefs, and physical sensations that occurred during the traumatic experience. Once the memory is triggered, these stored components are activated and cause symptoms relating to PTSD. Therefore, EMDR focuses on altering the way the memory is stored in the brain in the hope that it will eliminate adverse symptoms. Clients are invited to focus primarily on painful memories while the therapist administers rhythmic bilateral stimulation through

finger movement, tones, and taps. This process has been found to reduce the vividness and emotional connotation to the memory (APA, 2020).

EMDR does not include extended exposure to the traumatic memory, challenging or maladaptive cognitions, or detailed descriptions (APA, 2020; van der Kolk, 2014). It also does not require a trusting relationship between the therapist and client, nor do they need to speak the same language. It only requires that the client understands the process, which can be accounted for by a translator (van der Kolk, 2014).

EMDR is implemented by a minority of clinicians in South Africa. However, it is mostly used in conjunction with other approaches. In general, very few clinicians use EMDR in their practice because the training is expensive and the training course requires professionals to be trained in psychology and medicine to be accepted (Kaminer & Eagle, 2010).

Mind-body approaches. Mendelhall et al. (as cited in Kaminer & Eagle, 2017) argue that contexts with limited access to resources, specifically mental health services (Bruckner et al., 2011), like South Africa, should consider approaches that allow treatment to be delivered at the community level by non-professionals. Evidence based on alternative treatments like body-oriented approaches, meditation, and mindfulness have gained increasing popularity in literature, as noted by Cloitre (as cited in Kaminer & Eagle, 2017).

The potential for mind-body interventions to serve as a complementary therapeutic method for trauma survivors will be discussed in the light of the research study's theoretical framework, the polyvagal theory. Mind-body interventions are an effective tool for the regulation of the VVC function. As discussed in theoretical framework, the VVC is the subsystem in the human response that initiates prosocial behaviours and functions as an inhibitor to the fight or flight response (Porges & Carter, 2017). Scholars suggest that mind-body practices have the potential to "exercise" the vagal nerve, which, in turn, will foster

emotional regulation, overall physiological functioning, resilience, and prosocial behaviours (Porges & Carter, 2017).

The goal of mind-body practices is to help a person make the VVC more accessible. This complex mobilises prosocial behaviours and emotional states as well as adaptive responses to environmental stressors (Porger & Carter, 2017). It also aims to widen the threshold of tolerance of other neural platforms, change the relationship or response to the sympathetic nervous system and dorsal ventral complex's neural platforms, and become more skilled at moving in and out of these neural platforms (Porges & Carter, 2017). In other words, these practices aim to provide the practitioner with better control over neurological functioning and behaviour by instilling "vitality, present moment awareness, trust (including self-trust), agency, presence, connection, self-compassion, centeredness, embodiment, flexibility/fluidity, relational capacity, distress tolerance, curiosity, playfulness, and capacity for life-affirming emotions" (Werbalowksy, 2019, p. 21). Specific movements or postures, breathing practices, chanting, or meditation, which affect both top-down and bottom-up processes, activate the VVC which, in turn, ensures for optimal neural regulation of the ANS and related endocrine and immune systems (Porges & Carter, 2017).

Mind-body practices teaches an individual to become aware of their preparatory set by cultivating somatic awareness with mindfulness-based qualities of non-judgement, non-reactivity, curiosity, or acceptance in order to engage in a process of re-appraisal of stimuli (Farb et al., 2015). Somatic awareness can be divided into awareness of interoception which refers to internal sensations like hunger or pleasure, and proprioception which is the awareness of the body's position and orientation. This will help to effectively shift unhealthy patterns of response to internal and external stimuli within the preparatory set and give rise to healthier preparatory set patterns (Payne & Crane-Godreau, 2015).

Payne & Crane-Godreau (2015) suggest yoga as one mind-body practice that can shift one's preparatory set. Contemporary neuroscience stresses that our sense of self is anchored in a vital connection with our bodies (Damasio, 1999). Yoga proved to be a wonderful way to regain a relationship with the interior world and with it a caring, loving, sensual relationship to the self. Since trauma survivors experience a sense of disconnect with their bodies, yoga can be used to cultivate sensory awareness and a stronger connection with the self and other people (van der Kolk, 2014). Getting the social engagement system back on-line can also increase vagal tone, physiologically enabling more fluid sympathetic/parasympathetic fluctuation so that traumatised people can experience more joy and greater life balance (Shiota et al., as cited in Werbalowksy, 2019).

Another positive element of body-based interventions is the client's control over the healing process. Clients are able to dictate the process by determining the depth and pace of treatment which rebuilds autonomy and a sense of trust and safety and decreases shutdown or feelings of re-traumatisation (Rothschild, as cited in Werbalowksy, 2019).

Yoga therapy remains an evolving practice in complementary and integrative healthcare (CIH). However, it remains challenging to professionalise yoga as a therapeutic paradigm because of poor research reporting and assortment of the different yoga practices (Jeter et al., 2015). Yoga is among the most widely used complementary healthcare treatments for post-traumatic stress disorder (PTSD; Price et al., 2017). This article aims to contribute to the evolving practice and will shed light specifically on KY practice as a therapeutic methodology.

Trauma Treatment in the South African Context

Treating trauma in the South African context proves to be a challenging practice. Firstly, it is argued that numerous victims do not have a "post"-trauma period in which they can process and attempt to adapt to the most recent traumatic experience before the next

traumatic experience occurs. The reason for this is continuous exposure as for many South Africans, trauma is an inescapable part of daily life. Due to very high levels of violence in certain communities, inefficiencies, corruption, and the lack of capacity or resources in the criminal justice system, South Africans face the reality of future victimisation from which they are unable to escape. Certain groups, especially asylum seekers, are particularly vulnerable to continuous traumatic stress (Kaminer & Eagle, 2010).

Providing specialised counselling services is challenging because professionals trained in conventional therapeutic treatments are scarcely dispersed across the country with 1.58 mental health practitioners per 100 000 people (Bruckner et al., 2011). It is mostly disadvantaged communities, which are at high risk for exposure to trauma, that are excluded from specialised counselling services (William & Erlank, 2019).

Rithbaum et al. (as cited in Kaminer & Eagle, 2010) emphasised that although general cognitive behavioural therapy approaches have proven to be efficient and most popular among most practitioners when working with trauma, following the strict protocol embedded in these approaches poses challenges in a South African context. This is partly because of trained professionals being scarce, language and other resource barriers, and clients' inability to attend structural sessions for the prescribed amount of times. This results in only parts of the CBT approaches being used instead of the entire protocol.

Kundalini Yoga (KY)

Literature has emphasised the efficacy of using KY in trauma treatment, as it was found to reduce symptoms of PTSD and increase overall wellbeing in its practitioners (Jindani et al., 2015; Mitchell et al., 2014). KY programmes implemented in South Africa have not only presented significant results in decreasing symptoms of PTSD, but were also found to facilitate growth, positive self-awareness, improved self-regulation, sense of identity, and resilience. It also improved social isolation where participants shared social

interactions outside of the KY classes (Jindani & Khalsa, 2015). Another study implemented in South Africa found similar results, with mention of resilience together with improved insomnia, perceived stress, and anxiety. The researchers also found that participants had an increased ability to be present and achieve a restful state (Jindani et al., 2015). KY has also been adopted as an integral part of the therapeutic care programme at Recovery Direct, which is a group of specialised private rehabilitation centres for substance and behaviour disorders in South Africa (Recovery Direct, 2020).

Although research on KY's therapeutic abilities is still in its infancy, these studies suggest a promising future for the practice in South Africa. Additionally, KY philosophies are dedicated to developing a strong nervous system, which correlates strongly with the theoretical framework of this study. Therefore, KY was chosen as a practice of interest for the present study.

KY and Western medicine have a mutual understanding of the importance of the vagus nerve in health and well-being. Within the yogic practice, the vagus nerve is referred to as the "mind nerve", because the heart relays intuition, images, and creative insights to the brain via this nerve. Developing a strong nervous system is an integral part of KY to adequately support growing awareness, vitality, and resilience (Brown & Gerbarg, 2005).

KY was first considered as an aid to Western psychotherapy in 1932 when Carl Jung delivered a series of four lectures on the psychology of KY. This practice, which is also described as the "yoga of awareness", is a comprehensive contemplative system of practices that incorporates physical postures, breath and mantra, meditation and mental focus, self-observation, and relaxation (Jindani & Khalsa, 2015). More specifically, a Kundalini class follows a specific sequence for each class, starting with 1) mantras which are used to tune in, 2) physical warm up, 3) yoga set including postures, breaths, and mantras, followed by 4) relaxation, 5) meditation, and 6) prayers and mantras to end the class off (Tarlton, 2020).

Each component in the sequence serves a vital role in establishing a deeper understanding of one's emotions and harnessing the mental, physical, and nervous systems and bringing them under the practitioner's control. KY practitioners are invited to maintain mindfulness throughout the practice. Mindfulness forms a vital element of any mind-body practice, including KY.

Mindfulness has been proposed, extensively, as a potential contributor to the development of PTG. Mindfulness can be defined as the predisposition towards a metacognitive awareness towards present-moment experiences in a non-judgemental manner. Baer et al. (as cited in Hanley et al., 2015, p. 655) suggested five dimensions that are present during mindfulness practice: "observing sensory and perceptual experience; describing and differentiating emotional experience; acting with awareness; nonjudging of inner experiences; and nonreactivity to aversive thoughts and emotions". Therefore, mindfulness practices entail adaptive processes which can improve emotional autonomy through greater external and internal awareness of biological and cognitive processes (Lianchao & Tingting, 2019).

Yogic breathing has been found to stimulate the vagal nerve and strengthen the nervous system (Brown & Gerbarg, 2005). Vagal nerve stimulation, through Kundalini yoga, helps to rebalance the functioning of the ANS. Breath control serves an important function in yogic integration and self-regulation, as it is believed to focus and calm the mind and help direct it away from emotional causality (Jindani & Khalsa, 2015). Breathing in activates the SNS, which increases the heart rate, while breathing out activates the PNS, decreasing the heart rate (van der Kolk, 2014).

Learning how to breathe calmly and remaining in a state of relative physical relaxation, even while accessing painful and horrifying memories, is an essential tool for recovery (Brown & Gerbarg, 2005). In yoga, a person focuses on their breathing and their

sensations from moment to moment. They begin to notice the connection between their emotions and their body. Simply noticing what they feel fosters emotional regulation, and it helps them to stop trying to ignore what is going on inside of them. Once they start approaching their body with curiosity rather than fear, everything shifts. Trauma makes them feel like they are stuck forever in a helpless state of horror. In yoga, they learn that sensations rise to a peak and then fall. A practical example is to engage in a challenging pose and the instructor says that they will stay there for 10 breaths. This helps anticipate the end of discomfort and strengthens their capacity to deal with physical and emotional stress. Awareness that all experiences are transitory changes one's perspective on oneself (van der Kolk, 2014).

Meditation, the churning of the conscious and subconscious minds, serves a most important role in the yogic discipline of personal integration, self-regulation, and self-actualisation (Jindani & Khalsa, 2015). Research showed that intensive meditation has a positive effect on brain areas that are critical for physiological self-regulation (Hölzer et al., as cited in van der Kolk, 2014).

Taking all of this into consideration, there is strong evidence and philosophies supporting the healing effect on the physiological and emotional system of those who practice KY. Although there have been studies attesting to the feasibility of cross-cultural application and the benefits of KY, with specific focus on trauma survivors, the field remains under-researched. Both studies mentioned that participants experienced a sense of growth after they attended the KY classes (Jindani & Khalsa, 2015; Jindani et al., 2015). The present study is particularly interested in highlighting and understanding the growth that participants experience; therefore, the psychological changes will be investigated according to their experience of post-traumatic growth (PTG).

Post-Traumatic Growth

PTG refers to positive psychological changes that are experienced by trauma survivors following exposure to a highly stressful life circumstance. The term post-traumatic growth was first used by Richard G. Tedeschi and Lawrence Calhoun in 1996. These pioneers developed the functional-descriptive model of PTG to describe growth as a result of the individual's engagement with active coping skills following exposure to a stressful or traumatic event. Evidently, it is not simply the exposure to trauma that serves as a catalyst for constructive growth, but rather the way survivors deal with their new reality in the aftermath of trauma (Tedeschi & Calhoun, 2004).

An important distinction is made in the literature between resilience and PTG. Resilience is described as the ability to return to functioning before exposure to trauma and a person's ability to live a purposeful life after experiencing adversity. PTG does not refer to a return to baseline functioning, but rather an experience of improvement that surpasses prior states of adaptation (Tedeschi & Calhoun, 2014).

To experience a sense of PTG, survivors need to acknowledge their trauma and work through it in a sensible manner. Tedeschi and Calhoun (2004) proposed a framework for the growth process necessary to shift trauma into PTG.

Growth Process

Tedeschi and Calhoun (2004) start off by conceptualising people in terms of their assumptions about the world. They claim that individuals hold a general set of beliefs and expectations about the world which guides their actions and provides them with a sense of meaning and purpose. Exposure to a major life crisis tends to challenge, threaten, or even dismantle these schematic structures that guide people's understanding, decision making, and sense of meaning (Tedeschi & Calhoun, 2004). Furthermore, the unstable set of circumstances initiated by trauma exposure contradicts the way a person understands cause

and reason of events, and challenges existential beliefs related to one's purpose and meaning of existence. These threats lead to significant levels of psychological distress (Tedeschi & Calhoun, 2004).

Since the term PTG appeared in literature, researchers have been exploring the cognitive (Tedeschi & Calhoun, 2004), psychological, and psychosocial factors (de Castella & Simmonds, 2013) that initiate growth (Elderton et al., 2017; Hefferon et al., 2009; Ulloa et al., 2016). These factors will be discussed in detail below.

Factors that Initiate PTG

Cognitive factors. The psychological distress that a person experiences because of a highly stressful life event initiates cognitive processing and restructuring which entails persistent rumination and attempts to engage in stress-reducing behaviour. More specifically, ruminations are the cognitive processes people use to conceptualise emotions related to trauma. These processes can either be intrusive or deliberate (Cann et al., 2011).

Intrusive ruminations are described as invasive and negative and appear in the mind unexpectedly. It causes constant redirection towards the traumatic event which hinders personal recovery and development. Hill and Watkins (as cited in Lianchao & Tingting, 2019) found that intrusive ruminations predict psychological distress and are therefore detrimental to the development of PTG (Zhou et al., as cited in Lianchao & Tingting, 2019). On the other hand, Allbaugh et al. (2016) found that deliberate ruminations facilitate PTG. These cognitive processes are purposeful and facilitate positive conceptualisations of the traumatic event. Deliberative ruminations have been found to assist individuals in making sense of their post-traumatic world and promote self-growth (Tedeschi & Calhoun, 2004).

Garland et al. (as cited in Lianchao & Tingting, 2019) draw on the mindfulness-to-meaning theory, arguing that mindfulness practices can lead to positive evaluations of trauma as an opportunity for personal development and transformation. Hill and Watkins (as cited in

Lianchao & Tingting, 2019) suggest that mindfulness practices mediate the nature of a trauma survivor's ruminations.

Hanley et al. (as cited as Lianchao & Tingting, 2019) found that mindfulness correlates negatively with intrusive rumination. However, mindfulness was associated with higher levels of deliberate rumination, and deliberate rumination was associated with higher levels of PTG. Therefore, mindfulness is positively correlated with deliberate rumination. The results suggested that mindfulness could enable individuals to search for meaning and make sense of traumatic events which will eliminate intrusive cognitions.

Psychological factors. Tedeschi and Calhoun (2004) argue that while psychological processing requires a cognitive component, it also involves an emotional element. Therefore, trauma survivors need to engage in problem-focused – and emotion-focused – coping to predict PTG. Negative emotions and avoidance-focused coping are not predictors of growth (Kroemeke et al., 2017), while active coping methods, also known as problem-focused coping, correlate positively with PTG. Active coping skills include acceptance of a situation and logical analysis to positively reframe the experience (Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006). It also refers to addressing the root of the problem rather than avoiding it (Folkman & Moskowitz, 2004).

Psychosocial factors. Studies have shown that individuals who associate with religion or spiritual beliefs perceive growth after challenging life circumstances (Prati & Pietrantoni, 2009; Tedeschi & Calhoun, 1996). These factors can provide a source of comfort, meaning, or purpose to an individual's experiences. Having a secure relationship with a God or a higher being promotes the idea that meaning can be found in adverse experiences, and the possibility for growth increases. It also fosters a sense of intimacy and closeness with others who share the same belief system (Brewer et al., 2015).

Posttraumatic Growth Inventory (PTGI)

Tedeschi and Calhoun (1996) developed the Posttraumatic Growth Inventory to quantify and measure the extent of PTG experienced by trauma survivors. Positive transformation has been conceptualised as occurring within three domains: 1) personal growth, 2) interpersonal relationships, and 3) life philosophy. Furthermore, five dimensions were found to measure the extent of the three domains. The five dimensions of growth are: a) greater appreciation of life; b) recognising new possibilities in life; c) personal strength; d) connections with other people, and e) spiritual connection. These five domains will be discussed in detail below.

Appreciation for life. Trauma survivors are often confronted with a sense of mortality which shifts them to a greater appreciation of time and life itself. Those who experience PTG often report that they enjoy and appreciate each day more (Kuenemund et al., 2014) and celebrate the positive aspects of their lives to a greater degree because they value the second chance they have been given (Linley & Joseph, 2004). Individuals tend to place more value on intrinsic priorities, like family time, rather than extrinsic goals, like becoming rich (Calhoun & Tedeschi, 2014).

New possibilities. People who have been confronted with adverse experiences have shown growth through the desire to learn new skills, pursue different career paths, or engage in a new cause (Shakespeare-Finch et al., 2013). They change their perspective of what is important in life which could result in a return to education, adopting selfless careers, or focusing on health and wellbeing (Tedeschi & Calhoun, 1996).

Personal strength. Another key factor of PTG is the recognition of personal strength. This increased sense of strength is related to more openness, confidence, positive emotions, creativity, maturity, humility, empathy, and an improved sense of self (Tedeschi & Calhoun, 2004). Additionally, individuals mention a new sense of control over their lives and a deep

drive to keep on improving, which increases their capacity to cope with future stressors (Mapplebeck et al., 2015; Shakespeare-Finch et al., 2013).

Relating to others. Social connection is also known for its prediction of PTG (Buckley et al., 2018). Social support plays a strong role in the development of PTG if it remains consistent and stable over time, because cognitive processing is stimulated through perceived social support (Tedeschi & Calhoun, 2004). Neimeyer (as cited in Tedeschi & Calhoun, 2004) emphasises the importance of sharing one's trauma and survival with others. The development of these narratives helps survivors to confront questions of meaning and how it can be reconstructed.

Those who report growth also report enhanced relationships with family, friends, neighbours, and others who have experienced similar events. These relationships entail greater expressiveness of emotions, a sense of belonging, and feeling understood (Mapplebeck et al., 2015). People also express the selfless desire to relate and help others in similar situations (Vanhooren et al., 2017). Individuals have a deeper sense of awareness of who they can trust (Shakespeare-Finch et al., 2013).

Spiritual change. People who go through challenging experiences are often confronted with existential questions about life. It is important to note that people do not need to be actively religious to experience growth in the spiritual aspect of their lives (Tedeschi & Calhoun, 2004). PTG is also nurtured by non-theistic beliefs, with people reporting a deeper spiritual connection with the world around them (Shakespeare-Finch et al., 2013). Shaw et al. (2005) have found that placing one's faith in a higher entity can provide a sense of meaning and purpose in life. Religious experiences have been found to foster a sense of connectedness with others (Woodward & Joseph, 2003).

Kundalini Yoga and Posttraumatic Growth

Although previous studies have looked at a variety of predictors for PTG, no studies, to the researcher's knowledge, have investigated Kundalini yoga as a predictor of PTG in trauma survivors. After careful consideration of the literature available on the neurological changes initiated by trauma, current trauma treatments, mind-body models, and, more specifically, Kundalini yoga, this study wishes to investigate not only recovery from trauma through KY, but whether it can bypass previous functioning and promote post-traumatic growth. In short, this study will draw on Tedeschi and Calhoun's process to turn trauma into PTG and the predictors for PTG in other literature to conceptualise the participants' experiences and argue for the presence or lack of PTG in this study. More specifically, this study will focus on KY as a possible predictor to initiate the appropriate cognitive, psychological, and social restructuring to ultimately reach PTG. Should this restructuring be initiated by KY, it will be categorised within the five domains proposed by Tedeschi and Calhoun. Due to the explorative nature of the study, the researcher will remain curious about additional experiences of PTG that are brought forth by the participants.

Conclusion

It is evident that South Africans are at high risk of being exposed to traumatic events as found by Williams et al. (as cited in Kaminer & Eagle, 2017) and the South African Stress and Health study (Atwoli et al., 2013; Suliman & Stein, 2012). Currently, the majority of trauma survivors in South Africa are treated with either CBT, psychodynamic approaches, or an integrative approach called the "Wits Trauma Model" (Edwards et al., 2012; Kaminer & Eagle, 2010). Although these approaches have proven to reduce trauma-related symptoms, they fail to address the neurophysiological shifts that affect trauma survivors (Werbalowksy, 2019). Additionally, these interventions need to be delivered by highly trained professionals

and since these clinicians are scarcely dispersed across South Africa, a lot of people are excluded from the needed support (Bruckner et al., 2011).

Stephen Porges's polyvagal theory was used to explain the neurological changes caused by trauma and proposes that treatment plans be restructured to include interventions that target these changes directly, because they are not addressed through conventional therapies. A growing amount of literature on mind-body approaches shows promising results in shifting the neurological changes caused by trauma (Porges & Carter, 2017; Werbalowksy, 2019). Kundalini yoga was chosen as the mind-body intervention for the present study because of recent studies suggesting its efficacy in trauma treatment (Jindani & Khalsa, 2015; Jindani et al., 2015) and its use in some rehabilitation centres in South Africa (Recovery Direct, 2020). KY is practised in groups and does not require a professional trained in trauma treatment to facilitate the classes.

The principles of KY are closely related to the PVT, possibly explaining its therapeutic effects on trauma survivors (Brown & Gerbarg, 2005). Studies have found that trauma survivors experience a sense of post-traumatic growth after attending KY classes (Jindani & Khalsa, 2015; Jindani et al., 2015). The researcher is particularly interested in the nature of the growth that participants experience because of the yoga practice.

In the next chapter, the researcher describes the research methodology chosen to gain in-depth descriptions of the participants' lived experiences of KY's ability to foster post-traumatic growth.

CHAPTER 3

Research Design and Methodology

Introduction

This chapter contains an in-depth description of the methods that were utilised to undertake this study. Philosophical beliefs of epistemology and ontology guided the selection of the research design for this study (Leavy, 2014). Furthermore, the researcher describes the research sample which includes sampling techniques and sample group. The instruments and procedures that were used for data collection are discussed, as well as the methods used to analyse the data. Finally, the researcher describes the protocols that were followed to ensure trustworthiness as well as the ethical procedures.

Research Design

Tedeschi et al. (2018) noted that most of the research on post-traumatic growth (PTG) uses quantitative measures, because qualitative methods are regarded as more challenging than administering questionnaires. However qualitative measures can provide richer and individualised explanations as well as circumstantial factors affecting the development of PTG (Tedeschi et al., 2018). This study aimed to contribute to the body of qualitative knowledge through interviews with participants regarding their experience of PTG following continuous practice of Kundalini yoga (KY).

Lincoln et al. (as cited in Spencer et al., 2014) suggest that the researcher first clarify the distinct purpose of the enquiry, because it directs the type of ontological and epistemological approaches, which, according to Dainty (as cited in Zhao, 2014), are determining factors for research methods. The presenting study followed Crotty's (1998) suggestion that the researcher divide the research methods into the following stages: epistemology, theoretical framework, methodology, methods.

Epistemology

Guba and Lincoln (as cited in Spencer et al., 2014) describe epistemology as the approach taken to conceptualise how one came to know something or how one forms one's reality. This study took the epistemological stance of constructionism. From a constructionist viewpoint, Dainty (as cited in Zhao, 2014) describes that knowledge and what humans perceive as reality are produced through social interaction and that they are in a constant state of revision. It rejects the notion of a universal truth waiting to be discovered by the researcher but rather accepts that truth or meaning comes into existence through our interaction with the realities in our social world. Therefore, meaning is constructed and not discovered (Crotty, 1998). In this study, meaning was constructed through the participants' interaction with Kundalini yoga practice (KYP) as well as their interaction with the researcher.

Epistemology is closely related to the ontological stance of a study, which is why these two concepts tend to emerge together and are even used interchangeably in some instances. While epistemology refers to the method through which humans come to know something, ontology refers to what people perceive as reality. It is important to establish the ontological stance of a study, as it serves as the theoretical framework for data analysis which is described in section 3.5 below (Crotty, 1998). This study has taken the ontological position of interpretivism because the truth is sought for in the participants' subjective lived experiences of KYP and PTG. Interpretivism is a philosophical stance which claims that human perceptions and what we experience through our senses are regarded as the truth (Wills, 2007). From an interpretivist perspective, the study followed a generic qualitative design to gain a sound understanding of the participants' lived experience (Whittemore & Melkus, 2008). Researchers conducting a generic, or a basic, qualitative design aim to understand how people interpret their experiences, how they construct their social worlds, and what meaning is associated with certain experiences (Merriam & Tisdell, 2016).

Research Sample

Sampling Technique

Qualitative research designs usually require purposeful selection of a sample to best help the researcher understand the problem and the research question (Creswell & Creswell, 2018). Participants are chosen according to their relevance to the research question, and this does not allow for generalisation to a population (Bryman, 2012). In this study, purposeful sampling was implemented to identify a homogenous group of adults who have experienced trauma in the past and are currently practising KY in Johannesburg, South Africa.

Sample group

The sample group of seven adults, who originate from Alexandra, were identified based on their involvement in the KY teacher training that was provided through a non-profit organisation. Most of the participants had already finished their KY teacher training in 2020, while others were in the process of completing it.

Alexandra is an informal settlement, also referred to as a township, that forms part of the city of Johannesburg in South Africa. This township is regarded as a resource-limited area due to lack of housing and development, poor service delivery, and high rates of unemployment (Ebrahim, 2019). It was originally designed to accommodate around 70 000 inhabitants; however, current estimates suggest that between 180 000 to 750 000 people reside in Alexandra (The World Bank Group, n.d.). Additionally, this informal settlement has also been noticed for having high crime rates. It is rated among the top ten highest precincts in Johannesburg with regard to murder, sexual offences, attempted murder, common assault, illegal possession of firearms and ammunition, rape, and attempted sexual offences (Crime Stats SA, 2018).

Inclusion criteria for participation in this study were adults from a resource-limited area who were exposed to traumatic events and were practising KY on a regular basis in

Johannesburg, South Africa at the time of the study. Individuals of any gender, race, and cultural background could participate in the study. Exclusion criteria were limited to individuals who were not exposed to adversity, did not practise KY, and were under 18 years of age.

Data Collection

Data collection in a qualitative research design is mostly done through interviews. The rationale is that humans rely vastly on conversation as a tool to convey information, specifically on how they experience the world, feel, act, and think. These knowledge-producing conversations form the central point of qualitative interviews (Brinkmann, 2014).

In this study, the researcher conducted virtual semi-structured interviews with each participant in the sample group. Only one interview was scheduled per day to give the researcher time to reflect on the interview as recommended by Rubin and Rubin (as cited in Braun & Clarke, 2013).

Virtual Interviews

The interviews were originally scheduled to be conducted in a face-to-face manner. However, due to the restrictions enforced by the South African government in response to the global COVID-19 pandemic, these meetings were not permitted. Therefore, the researcher had to consider alternative virtual platforms to conduct the interviews.

Scholars have found that virtual interviews are a time- and cost-effective way to conduct meetings if geographical constrictions pose to be a problem (Braun & Clarke, 2013). However, email, online, and telephone interviews have been criticised for excluding the visual aspect which allows for direct observation of emotional or visual cues (Braun & Clarke, 2013). Furthermore, visual connection between the researcher and the participant is important because it establishes trust and rapport (Braun & Clarke, 2013). Therefore, the

researcher chose to use WhatsApp video call to interact through audio and video in real time. Cellular data was provided to each participant to cover an hour of interview time.

Bryman (2012) suggests that the researcher be well prepared and anticipate possible challenges that might arise during the interview process. He suggests that the interview be done in a setting that is quiet and provides privacy. The researcher made sure that she was in a private room and urged the participants to do the same if it was possible within their homes. Two recording devices were used to record the sessions and the researcher familiarised herself with the operation of the equipment prior to the interviews.

Semi-Structured Individual Interviews

In this study, the researcher conducted semi-structured interviews with each participant in the sample group. According to Kvale and Brinkmann (as cited in Brinkmann, 2014), the aim of a semi-structured interview is to obtain descriptions of the social world of the participant so the researcher can interpret the meaning of the described phenomena. The researcher wanted to obtain descriptions of the participants' experiences of PTG and whether they felt it was influenced by their regular participation in KYP.

Furthermore, semi-structured interviews were utilised since it allowed the interviewee to diverge to explore a response in further detail. The flexibility of this approach allowed for elaboration of important information about the participants' experiences which may not have been included as themes in the interview guide (Gill et al., 2008).

While semi-structured interviews receive wide recognition in qualitative research designs, it is important to recognise the disadvantages of using these interviews. Denscombe (as cited in Newton, 2010) emphasises the interviewer-effect, described as interviewees' different responses depending on how they perceive the interviewer. Gomm (as cited in Newton, 2010) also found that the interviewees' responses might be influenced by what they think the situation requires. Therefore, the researcher established the purpose of the study at

the onset of the meeting to put the interviewee at ease (Newton, 2010). Furthermore, the interviewer took a non-judgemental stance during the interview, and avoided agreeing or disagreeing with a participant's response to prevent distortion of further answers.

Throughout each interview process, the researcher used an interview guide (see Appendix A) that consisted of demographic information, two closed-ended questions that related to the participants' degree of involvement in KYP, a modified version of the Adverse Childhood Experience Questionnaire (ACE-Q), and the Post-Traumatic Growth Inventory−Short Form (PTGI−SF). These measurement tools are described in detail in the paragraphs below. All the questions were covered with each participant and worded in a similar manner, although the order of the questions varied. Throughout, the interviewer took a flexible stance and followed up on leads or interesting points and cleared up inconsistencies in the participants' answers (Bryman, 2012).

Adverse Childhood Experience Questionnaire (ACE-Q)

The ACE-Q measurement tool was developed to describe the long-term relationship between childhood abuse or household dysfunction and health and medical problems later in life (Felitti et al., 1998). The questionnaire elicits information about exposure to 10 types of childhood trauma related to personal and physical abuse, verbal abuse, sexual abuse, physical and emotional neglect, alcoholism, domestic violence, family member in jail, mental illnesses in the family, and loss of parent (Anda & Felitti, 2003).

The purpose of administering the ACE-Q in this study was to determine the extent of trauma exposure the participants have endured throughout their lives. Since the study focuses specifically on trauma survivors, the researcher implemented this tool to confirm that the interviewees were indeed trauma survivors. These adverse experiences are included in the discussion of the results in Chapter 4 of this study.

This questionnaire is easily accessible online and is found easily administrable and well understood by participants. However, it has been criticised for not reporting on the full capacity of the participants' accounts because of the specific use of words in the questionnaire (Koita et al., 2018). Therefore, it came as no surprise that other scholars in South Africa who implemented the ACE-Q used a modified version (Manyema et al., 2018; Manyema & Richter, 2019). Both South African studies added chronic illness, unemployment, and parental death in addition to the ten adverse childhood experiences used in the original ACE-Q. In the present study, no questions were added but limitations were managed by asking the participant if they had experienced any other challenges during their lifetime. Therefore, participants were not excluded from the study if they did not report any of the adverse events described in the ACE-Q. Furthermore, to serve the purpose of this study, the ACE-Q was modified to allow the participants to not only report on the events in the first 18 years of their life, but their whole lifespan (Appendix A).

The Post-Traumatic Growth Inventory – Short Form (PTGI–SF)

The PTGI–SF, created by Tedeschi and Calhoun in 1996, was used as a guideline during the semi-structured interviews to elicit information about the participants' experience of PTG. This inventory consists of 10 statements and elicits data on five themes that have been found to foster PTG, namely: new possibilities; personal strengths; appreciation of life; spiritual/existential change; and relating to others" (Tedeschi & Blevins, 2015, p. 373). The PTGI–SF is a modified version of the original Posttraumatic Growth Inventory, which consists of 21 statements. The original version received critique from participants and researchers for being too extensive; therefore, the short version was developed. The objective was to reduce the number of statements while maintaining the quality of the scale properties (Aslam & Kamal, 2019).

The PTGI–SF is used extensively and regarded as a sound measure of positive change in trauma survivors. Although the PTGI–SF was developed in a Western context, it has been translated, modified, and utilised in diverse societies across cultures, supporting the sound nature of its psychometric properties (García & Wlodarczyk, 2015; Heidarzadeh et al., 2017; Weiss & Berger, 2006). Although, the efficacy of the PTGI–SF remains under-researched, scholars have begun to assess its ability to yield reliable and valid results in the South African context. Otto's (2019) study, although the findings should be interpreted with caution and further investigation is strongly advised, provided support for the use of the inventory in South Africa. In another study, Roe-Berning (2013) found the use of the PTGI–SF to be adequate in measuring PTG. However, further factor analysis and explorative analysis were strongly recommended.

Bracketing

In a semi-structured interview, the researcher serves as a tool through which data is collected and analysed. Tufford and Newman (2010) suggest that a subjective stance is inevitable as researchers bring their own assumptions, values, emotions, and interests into the interview process. However, researchers can use bracketing which is a self-reflective process whereby they identify and set aside their own preconceived ideas and perspectives to attend to the participants' accounts in a mindful manner. Starks and Trinidad (as cited in Tufford & Newman, 2010) suggest that researchers include their thoughts and hypotheses in the self-reflective process.

In the present study, the researcher followed the suggestion made by Cutcliffe (as cited in Tufford & Newman, 2010) and kept a self-reflective journal (see Appendix B) throughout data collection, data analysis, and after the feedback session to the participants to reflect upon her engagement with the data. As prescribed by Glaser (as cited in Tufford & Newman, 2010), procedural aspects of the process as well as observational comments were

included in the memos to help the researcher become aware of her own assumptions and investment in the data and to distinguish whether an idea belonged to her or to the participant (Tufford & Newman, 2010; Willig & Stainton Rogers, 2017).

Data Analysis

After data was gathered through the semi-structured interviews, the researcher analysed the participants' interpretation of their experiences of a KYP and its ability to foster PTG. Since there are different ways to analyse data gathered from participants, Howitt (2016) recommends that the researcher considers the rationale for the study and what type of information is expected to be given in the conclusion. In the present study, the researcher collected data to arrive at a deeper understanding of how people experience the topic being discussed. Thematic analysis is proposed as a valuable method when the goal is to create a deeper understanding of a phenomenon (Howitt, 2016). Additionally, Braun and Clarke (2006) suggest that when working with an under-researched area or where the participant's views are unknown, it is best to implement a rich thematic description of the dataset.

Thematic Analysis

Howitt and Cramer (in Howitt, 2016) use thematic analysis as an umbrella term to describe the process of transcription, analytic effort, and theme identification. Thematic analysis is the process through which raw data is transcribed into an organised format and examined to identify themes which summarise the content of the data (Howitt, 2016).

Transcription refers to the process through which data is converted into a textual format. The data that was gathered during the interviews was recorded on an audio device and imported into a software programme that assisted with the generation of textual transcriptions of digitised sound files (Silver & Lewins, 2014). The researcher used a high-quality audio recorder to increase the sound quality to support accurate transcription. Since this study contained sensitive information, the participants' responses were anonymised after

the interviews were transcribed. Instead, the label of ‘P’ was used to indicate ‘participant’ and a number between 1 and 7 allocated to each participant. The transcribed data served as a vehicle through which themes were identified and explored.

Themes capture something important about the data in relation to the research question and present some level of patterned response or meaning within the dataset. It is important to clarify what will count as a theme and the breadth of the theme. While researchers hope for several instances of the theme across the data, the quantity does not necessarily mean the theme itself is more crucial. Therefore, a theme does not depend on quantifiable measures but rather on whether it captures something important in relation to the overall research question.

Scholars have already identified five major themes, as discussed in Chapter 2 of the study, that tend to foster PTG (Tedeschi & Blevins, 2015). The researcher implemented the PTGI–SF, which elicited information with regard to the applicability of these themes on the interviewees’ experiences of KYP. Therefore, these five themes were used as a framework for each participant’s interpretation while the researcher remained curious and explored new themes and subthemes brought to light through the participants’ experiences. The researcher conducted a theoretical thematic analysis and employed a constructionist paradigm to direct the nature of the analysis and how it was presented in the write-up (Braun & Clarke, 2006). From a constructivist perspective, analysis aimed to discuss how the context, in this case Kundalini yoga, enables the individual’s experience, if any, of PTG.

Thematic analysis entails a range of tasks for which there is no prerequisite set of procedures or strict guidelines a researcher must adhere to. Within the flexible nature of process, scholars have reached consensus on a few aspects in thematic analysis. Most agree that it is not a linear process and should be implemented in a cyclic or recursive manner (Braun and Clarke, 2006; Silver & Lewins, 2014). The researcher must be able to move

between processes as ideas are explored, codes are made, and themes described (Silver & Lewins, 2014). The researcher drew on Braun and Clarke's (2006) guidelines for analysis to assist her through the thematic analysis process. These phases are described below, while their implementation will be discussed in Chapter 4.

During *phase 1*, the seven interviews were transcribed from the voice recording device into a written format. The transcription of the audio recordings was outsourced due to limited funds and time constraints for the researcher to acquire her own software and familiarise herself with the use thereof. However, the researcher took extra precaution to familiarise herself with the data by reading the transcripts and listening to the audio recordings repeatedly while searching for patterns and meanings (Braun & Clarke, 2006).

In *phase 2*, the researcher identified extracts from the data that related to the research question, which is referred to as codes. Coding aids the organisation of data into meaningful groups that are more specific than themes. Braun and Clarke (2006) recommend that the researcher provide as many codes as possible. In *phase 3*, the researcher categorised the codes under different themes and subthemes. The five main themes were gratitude, interpersonal relationships, personal strengths, recognising new possibilities, and spiritual change.

Phase 4 involved the final analysis and writing up of the report (Braun & Clarke, 2006). The textural description in the write-up served as a narrative explaining the participants' perception of a KYP in fostering PTG. The researcher elaborated on the meaning units in a narrative format including verbatim quotes to facilitate the understanding of the participants' experiences (Yüksel & Yildirim, 2015). The letter P was used to denote the participant and the number following denoted the number in which this participant appears in the table of demographics as shown in Chapter 4. Ultimately, the researcher was able to conclude on the participants' lived experiences of KYP and its ability to foster PTG.

Trustworthiness

Guba and Lincoln (in Bryman, 2012) criticised the application of quantitative standards of reliability and validity to a qualitative research design, because the quantitative criteria presuppose that a single truth of social reality exists. Qualitative design takes on a different approach by suggesting that there can be more than one and possibly several accounts of the same experience. Therefore, researchers suggest the use of trustworthiness, which consists of credibility, transferability, dependability, and confirmability to assess qualitative studies.

Credibility

The credibility of qualitative research depends on the extent to which the findings reflect the participants' true experiences and whether the researchers' interpretations of the data provide a true representation of the participants' subjective worlds (Korstjens & Moser, 2018). From a constructivist view, it is impossible for a researcher to present a complete objective account of the data, because researchers use their own views of the social world to construct the data. Even though a definite social reality might not be reached, certain practices can be implemented to ensure that the data is as close as possible to the participants' construct of reality (Bryman, 2012).

A technique called "member validation" was used to confirm that the interpretations made by the researcher were in line with the participants' experiences (Bryman, 2012). This is a good method to ensure that there is a good correspondence between the findings and the perspectives and experiences of the participants. The researcher implemented member validation through feedback sessions with the participants to scrutinise her interpretations of their experiences before writing the final reports. They were called, the researcher read out the summarised transcript, and they were asked to scrutinise the researcher's interpretation of their experience of the KYP. These sessions commenced via a phone call which lasted around

15 minutes depending on the participants' feedback. In some cases, the researcher asked interviewees to elaborate on certain statements that were made during the interview if she was uncertain what they meant.

Transferability

According to Treharne and Riggs (2015), transferability refers to the extent to which the findings are applicable to other contexts. In-depth/rich descriptions of participants' responses contribute to transferability as other researchers are provided with enough information to decide whether the data is transferable to their setting (Korstjens & Moser, 2018; Treharne & Riggs, 2015). Bitsch (as cited in Anney, 2014) claims that thick descriptions of all the research processes, from data collection and context of the study to the production of the final report, are paramount for transferability. Additionally, the researcher provided the reader with detailed accounts of the methodology of the study as well as a thorough description of the environmental context of the study, as it contributed to the comprehensiveness of the data (Korstjens & Moser, 2018). Bitsch (as cited in Anney, 2014) also notes that purposeful sampling delivers focused, in-depth findings which further contribute to the transferability of a study.

According to Chilisa and Preece (as cited in Anney, 2014), stepwise replication is a data evaluation procedure where more than one researcher analyse the same set of data independently and compare the results. This is frequently used to determine transferability, because it is expected for the two, or more, researchers to reach the same conclusions. However, this technique was not implemented in this study due to time constraints and is recommended for future studies to improve transferability of the study outcome. This study aimed to contribute to the body of knowledge on using a KYP and provide recommendations for future studies.

Dependability

To produce data that is dependable, Lincoln and Guba (as cited in Bryman, 2012) suggest that researchers adopt an auditing approach with a specific focus on the research design. Peers or a supervisor act as assessors to establish how well the research design was implemented. The researcher kept all records which were used in the auditing process during the debriefing sessions with her research supervisor.

Confirmability

By using semi-structured interviews, the researcher construed the participants' experiences of KY. Since the researcher is involved in making meaning of the participants' experiences, her views and understandings will form part of what is regarded as the truth in the presented data. Drawing on the constructivist approach and with an emphasis on the subjectivity of knowledge, the researcher needs to be aware that her social inquiry and interpretations will be influenced by her values and perspectives (Chilisa & Kawulich, 2012).

Although it has been recognised that complete objectivity is impossible, confirmability is concerned with whether the researcher's own personal biases, motivations, or theoretical inclinations overtly influenced the research (Bryman, 2012). Confirmability is compromised when a researcher's perspectives overshadow the participants' experiences, which will obstruct the possibility of another researcher performing the same study to reach the same conclusion (Korstjens & Moser, 2018; Treharne & Riggs, 2015).

In this study, the researcher followed the guidelines proposed by Korstjens and Moser (2018) to enhance confirmability. All interviews and meetings were documented on a recording device, adaptations of the ACE-Q and PTGI–SF were clearly indicated, and the emergence of information about the data management was documented.

The researcher pre-empted that her neutrality might be hindered in that she expects the participants to benefit from the KY. Therefore, she used reflexive journaling (Appendix

B), which is a bracketing technique, to scrutinise her own assumptions and investment in the data and to distinguish whether an idea belongs to her or to the participant (Tufford & Newman, 2010; Willig & Stainton Rogers, 2017).

Ethical Considerations

Ethical Clearance

The Health Professions Act of 1947 (Department of Health, 2006) Code of Ethics requires that institutional approval must be obtained in order to conduct a research study. Permission was sought and ethical clearance was provided by the Ethics Committee of the Faculty of Education at the University of Johannesburg. Please see Appendix C for the certificate with ethical clearance number: Sem 2-2019-070.

Informed Consent

Potential participants were given a detailed description of the research study (see Appendix D) after which those who were willing to participate were able to contact the researcher directly. Informed consent was obtained from the willing participants prior to the interview process (see Appendix E). Participants were given the power of free choice after they were informed that participation is voluntary and that they have the right to withdraw from the study at any given moment during the process. Participants were also informed that they would not receive any compensation for their participation to the research.

Confidentiality

Confidentiality was ensured by not including any information or data that would exploit the participants' identity. The letter P followed by the number in which the participant appears in the table of demographics was assigned to participants in the discussions of their responses. However, because the participants were known to each other, anonymity could not be maintained throughout the course of the data collection process.

Respect for Human Rights and Others

The research process respected the participants and the researcher treated them with human dignity. Respect for participants was ensured by optimising their time and only collecting data necessary for the objectives of the study. Completed interviews were saved with password protection on a flash drive and kept safe where no one other than the researcher had access to it.

The privacy of participants was respected in that their interviews were held in a private room and they had the right to control the distribution of personal information. During the feedback sessions, the participants were given a chance to eliminate any personal information they did not wish to be disclosed in the report. Although participants were encouraged to answer all the questions, they were not forced if they wished not to answer. The researcher suggested that the participants use the phrase: “I do not wish to answer that” if they wanted to skip the question.

Prior to participation, the benefits and risks of the study were explained to the prospective participants. They were informed that their participation might have a positive effect on research and therapies related to trauma release. Considering that the study required active participation and the disclosure of sensitive information, it was considered high risk for participants. The participants were informed about the possible risk of re-traumatisation and disclosure of sensitive information. The researcher suggested that should an interviewee feel overwhelmed, the session would be discontinued immediately, and they could call Lifeline, SA’s toll-free number (011 715 2000) for online counselling.

Lastly, as the researcher, I committed myself to be trustworthy throughout the research process, adhering to the abovementioned ethical principles and working carefully to prevent errors which may invalidate the data collected.

Conclusion

In this chapter, the researcher described the qualitative methodology that was implemented to gain a deeper understanding of trauma survivors' experiences of KY to nurture PTG. The sample consisted of seven adults who have been exposed to adverse events in the past and are currently practising KY on a regular basis. Data was collected through semi-structured interviews that were performed over WhatsApp video call. The researcher followed the guidelines proposed by Braun and Clarke (2006) to perform thematic analysis with the data. The procedures to ensure trustworthiness and ethical aspects were also detailed.

CHAPTER 4

Discussion of Results

Introduction

In this chapter, the researcher discusses the participants' experiences of the practice of Kundalini yoga (KY) in their post-traumatic growth (PTG). Thematic analysis of individual interviews with seven participants was implemented to identify themes of data gathered from the semi-structured interview. These themes are discussed and analysed in relation to the theoretical framework which is the polyvagal theory (PVT) and other relevant literature to conclude whether the participants experienced PTG. More specifically, the researcher was interested in identifying whether these participants experienced factors that have been found to predict PTG as discussed in Chapter 2 of this study. Therefore, the discussion will aim to answer the research question of whether the practice of KY facilitates the development of PTG.

Biographical Information

Seven participants took part in this study. Table 4.1 presents the demographic information of each participant which includes age, gender, and the number of years each participant has been practising KY.

Table 4.1

Demographic Information

Participant	Age (in years)	Gender	Years practicing KY
Participant 1	20	Female	+- 1 year
Participant 2	22	Male	+- 5 years
Participant 3	28	Female	+- 1 years
Participant 4	20	Female	+- 2 years
Participant 5	20	Female	+- 2 years
Participant 6	26	Female	+- 6 years
Participant 7	21	Male	+- 5 years

Results of Adverse Childhood Events Questionnaire (ACE-Q)

As indicated in Chapter 3, the ACE-Q was used to determine the extent to which the participants have been exposed to adversity throughout their lives. Although the questions from the ACE-Q elicited intimate information (see Appendix A), all but one participant responded freely about the adversities they have experienced. Five of the seven participants experienced between three to eight of the adverse events as described in the questionnaire, while one participant only confirmed one of the events and another spoke about adversity that was not included in the ACE-Q. Therefore, the result of the ACE-Q showed that all the participants experienced some form of traumatic experience prior to starting KY.

Discussion of Results from Posttraumatic Growth Inventory – Short Form (PTGI–SF)

The PTGI−SF, which was discussed in Chapter 3, was utilised as a guideline during the semi-structured interview to elicit information about the participants' experience of PTG (see Appendix A). The researcher performed thematic analysis, as described in Chapter 3, to organise the data from the interviews into themes and subthemes. The participants' experiences are summarised in Table 4.2. Each theme and subtheme is discussed in the sections below. The participants' experiences are illuminated as well as the researcher's rationale of the conclusions related to PTG. Additionally, the PVT is also weaved into the discussion to explain the neurological shifts that were initiated by KY and, in turn, facilitated PTG.

Table 4.2

Themes and Sub-Themes

Themes	Subthemes
Gratitude	
Interpersonal relationships	Interest in connection
	Enhanced relationships with others
Personal strengths	Active coping skills
	Self-efficacy
	Awareness
	Compassion
Recognising new possibilities	
Spiritual change	

Literature confirms that all the themes and subthemes in Table 4.2 are predictors or indicators of PTG. Kim and Bae (2019) found that gratitude plays an important role in predicting PTG, because it enhances deliberate thinking which promotes self-growth (Zhou et al., as cited in Lianchao & Tingting, 2019). Literature confirmed that enhanced interpersonal relationships correlate positively with PTG, because these connections are vital in restoring trust in the aftermath of trauma (Buckley et al., 2018; Mapplebeck et al., 2015; Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 2004; Vanhooren et al., 2017).

The third theme describes an increased sense of personal strengths which has been found to enhance PTG (Tedeschi & Calhoun, 2004). In the discussion below, the researcher distinguishes between the different strengths and how they relate to PTG. Trauma survivors' ability to recognise new possibilities in life is closely related to enhanced growth (Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 1996). The fifth theme relates to spiritual growth which entails active religion and non-theistic beliefs. Scholars have found this to predict PTG because it provides a sense of purpose and meaning in life (Cadell et al., 2003; Shakespeare-Finch et al., 2013; Shaw et al., 2005; Tedeschi & Calhoun, 2004). These

themes and subthemes form the structure of the discussion of the participants' experiences below.

Gratitude

Most of the participants in this study reported an increased sense of gratitude for life, others, or themselves which is illuminated in the discussion below. Watkins et al. (as cited in Kim & Bae, 2019) described gratitude as consisting of an appreciation of aspects of daily life and others. Furthermore, Emmons and Shelton (as cited in Kim & Bae, 2019) noted that gratitude refers to a sense of thankfulness and joy for that which you have received from others and nature. This type of appreciation plays an important role in PTG because gratitude has been found to correlate positively with deliberate ruminations and negatively with intrusive ruminations (Kim & Bae, 2019). As discussed in Chapter 2, deliberate ruminations refer to purposeful cognitions that facilitate positive conceptualisations and promote self-growth while intrusive ruminations predict psychological distress (Tedeschi & Calhoun, 2004; Zhou et al., as cited in Lianchao & Tingting, 2019). The range of gratitude experienced by the participants is discussed below.

P4 testified that she experienced trauma when she tried to take her own life and that she was grateful for the new lease on life that she experienced through KY: "…wanted to die. I felt I'm no longer belonging here on earth, so … but Kundalini yoga changed me". She felt like KY has provided her with "a second chance" and therefore her appreciation of life has improved. She specified that "being in your own space, meditating, seeing those thoughts and imagination coming to you while you're in a quiet zone" helped her to reach a deeper sense of gratitude. P3 described herself as being previously unaware: "I didn't pay attention to what was happening around me, I was just living for the sake of … we are here as humans we have to live. I did have a purpose, but I wasn't acting up on it". She indicated that she found that KY helped her cultivate a deeper sense of awareness of her purpose in life and activated her

towards it, which fostered her sense of gratitude for her life. P1 expressed that she had a deeper appreciation for each day: “Yes, I do appreciate each day better because I know that it's a new day because of the possibilities. I can improve myself, help someone out, change someone’s life, the possibilities are endless”.

Other participants noted that they have a deeper sense of appreciation for themselves. P6 said that she feels “more content with myself … I feel like there is value in me … through KY it helped me see the importance in me.” P4 also expressed a sense of being more content with herself in saying that she used to “go out here in the streets, late, maybe drink, and go around making noise … so now I can just stay home the whole day … I don’t mind. I will just play yoga music and then meditate”.

Five out of the seven participants expressed a greater sense of appreciation for other people. More specifically, they mentioned a greater acceptance and admiration for the differences among people and that, without being naïve, they choose to focus on seeing the positive rather than the negative in each person. P3 summarised the reason for greater acceptance of others by saying that “because we are all humans, and we are different in our own way. We have different gifts”. Additionally, P6 believes that “in each and every person you learn something”. P6 referred to one of the teachings in KY: “That’s like … it’s one of the sutras that they taught us like … You have to realise that the other person is you so with that you get to treat everyone the same”. One of the five sutras, or teachings, of KY is to recognise that the other person is you (see https://www.3ho.org/3ho-lifestyle/5-sutras-aquarian-age for an explanation of the sutras).

Overall, it was found that KY has helped the participants to reach a deeper sense of gratitude for life, themselves, and others, leading them to have a higher regard for intrinsic priorities as opposed to extrinsic goals which Tedeschi & Calhoun (2015) found to be a prominent tendency for those who experience PTG.

Interpersonal Relationships

Trauma survivors' sense of disconnection with self and others is initiated by a biological freeze response via the parasympathetic nervous system (PNS). Although this is considered a normal response during stressful events, trauma victims also dissociate from non-threatening, every-day experiences and disengage from their lives (van der Kolk, 2014). This is due to a decrease in vagal control which leads to inaccurate neuroception of the extent of threat or safety in one's environment. Social interaction and adaptive behaviours rely on the nature of the evaluation that is made by each individual's nervous system regarding the extent of danger or safety. A neuroception of safety is necessary for social engagement behaviours to occur. Furthermore, people with poor social engagement systems have inner ear difficulties which makes it challenging for them to perceive others as supportive (Porges, 2011). The participants, experiencing disconnection and isolation, functioned within a nervous system that was bombarded with signals of threat even in the absence thereof, while the improvement of connectedness is ascribed to increased vagal tone.

Scholars have confirmed this by finding that trauma appears to disrupt trust and belief that the world is a safe place (Herman, 1992). Disruption in interpersonal relationships has a deeply negative effect on the survivor's quality of life (Lopez-Zeron & Blow, 2017). Therefore, because trauma survivors' ability to form strong connections within their interpersonal relationships is compromised, an improved ability to connect correlates positively with PTG (Buckley et al., 2018; Mapplebeck et al., 2015; Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 2004; Vanhooren et al., 2017). More specifically, these studies found that improved connections and perceived social support foster PTG.

The participants found that KY facilitated a shift from antisocial to prosocial behaviours and a feeling of connectedness. This shift can be ascribed to the improved accuracy with which their nervous systems evaluate external threats to danger and the lack

thereof. It is therefore possible that KY helped these participants to increase their vagal tone which is paramount for social engagement (Porges, 2011).

Overall, all the participants attested to growth to a certain extent in their interpersonal relationships. These experiences are described according to an enhanced interest in connection and improvement in current relationships.

Interest in connection. Two participants said that before they started practising KY, they were closed off and had very little interest in social connection, which, according to Buckley et al. (2018), could be detrimental to the development of PTG because social connection s been found to predict PTG.

P2 found that he started having interest in "socialising and knowing from other people what interests them, because I like development". P4 felt that previously he did not want to have friends but "because of Kundalini now I'm more interested. I want to know what the other person is thinking". P3 said that although she was always friendly and surrounded by people, she never felt connected to them. However, through establishing a greater sense of self-awareness, KY helped her realise that she indeed feels disconnected from them. KY helped her to become aware of her gift for comforting and helping other people and she feels more connected to them now. P3: "I'm more into advising people, like, whenever they are around me … they feel there is a presence, that I think is attracting them to me. That they end up connecting with me". It was evident that P3 felt through KY she felt connected to the people around her now and while she offers them support, she also perceives them as supportive and caring in return. Tedeschi and Calhoun (2004) found that cognitive processing is stimulated through perceived social support, which, in turn, plays a strong role in the development of PTG.

P5 mentioned that she was wary of trusting people before and had very little interest in others. "I was not able to give them a chance for me to trust them so I was just judging but

now I think I'm more trusting so I believe that I give someone a chance". Additionally, KY has provided her with platforms where she feels comfortable enough to associate and connect with people and even befriend some of them. "You know I used to be an introvert but now I've started building relationships with … I started having friends because I never had friends."

Enhanced relationships with others. Mapplebeck et al. (2015) found that trauma survivors who experienced growth also reported to have enhanced relationships with family, friends, and neighbours who have experienced similar events. Enhanced relationships have been related to greater emotional expression, sense of belonging, and feeling understood by others (Vanhooren et al., 2018). The reason for this positive correlation could be that enhanced relationships provide survivors with a safe space to deal with their stress, whether the stress is directly related to their trauma or not. Literature shows that self-disclosure is a central avenue of interpersonal communication which, in turn, plays a vital role in establishing intimacy in relationships (Omarzu & Harvey, 2012).

Three participants mentioned an increased ability for self-disclosure which has been found to foster higher emotional connection and feelings of intimacy and closeness with others (Tedeschi & Calhoun, 2004). P1 said that she knows better how to identify who she can "tell my things to or whom I really communicate with" while P5 experienced that "I tell everything the way it is, and how I am feeling, so I love that I have supportive friends so every time I know that I can free myself and just tell them whatever". P7 indicated: "Last year when I first came, I was quiet and didn't talk with anyone, as I did the practice ... yoga helped me to express myself that way."

Literature highlights that impaired social engagement systems are associated with the misinterpretation of safety as threat while objective danger is regarded as safe (Porges, 2011). This explains why Tedeschi and Calhoun (2004) found the tendency to do introspection and

correctly interpret interaction with others to be an indicator of PTG. Furthermore, reflexive thinking causes some relations to become more meaningful, while others are weakened or ended. In line with relational introspection and PTG is a deeper sense of awareness, which will enhance the interpretation of who one can trust (Shakespeare-Finch et al., 2013). Participants expressed varied levels of introspection. P1 said that she is now able to identify who "I really connect to and who they really come through for me when I need help – it's not everyone". She also mentioned that KY has helped her to see who those people are that she has similar interests to. P2 was better able to instil boundaries in relationships and felt that both parties have a role to play and "if I feel there's no balance, then I don't think I should continue putting more effort". P4 mentioned that previously she was involved with "friends who I would just go out here in the streets and maybe drink and go around making noise". She reflected that KY had helped her to identify more meaningful friendships:

> Now I think my friendships are the good ones. I can see … all those people who are around me – they put effort into my life. They're trying to change me. They're trying to put me where I have to be, other than the ones I had last.

Due to her perceived sense of support from her new friends, she places more value on her relationships. P6 also experienced her relationships to be more meaningful: "There's a different connection now. The relationships with other people, it's not something that has to do with material things and … like there's more into relationships than just having to talk about people, gossip".

Three participants commented on their enhanced relationships and feelings of connectedness when they practice yoga with other people. P3 said that "I feel more connected whenever I'm doing it in a group … because that's where I get to connect with everyone and feel everyone's presence" while P4 also confirmed that she feels closer to other people: "Especially the ones I was doing training with. I have a strong bond with them". P5

mentioned that when she started practising with her family, she noticed a positive shift within all of them: “it also makes peace in the house. When we do meditation … there’s peace, there’s love, we are happy … we accept things … I’m not the only one growing myself, but my whole family”.

Personal Strengths

Tedeschi and Calhoun (2004) describe increased personal strength to be related to PTG. Personal strengths refers to more openness, confidence, positive emotions, creativity, maturity, humility, empathy, and an improved sense of self (Tedeschi & Calhoun, 2004). All the participants experienced that KY facilitated the improvement of their personal strengths with regard to active coping skills, drive towards development, self-reliance, communication skills, awareness, and compassion.

Active coping skills. Lazarus and Folkman (as cited in Bussell & Naus, 2010) describe active coping as cognitive and behavioural efforts to master, reduce, or accept internal and external demands of a stressful encounter. Coping can be divided into problem-focused coping which entails dealing with the problem that causes distress, and emotion-focused coping or emotional regulation. It has been confirmed that coping strategies and emotional regulation strategies play a key role in developing PTG (Bussell & Naus, 2010). Emotion – and mood regulation are dependent on the vagal nerve’s control over prosocial physiological states (Porges, 2017).

Since literature suggests that active coping skills entail problem-focused coping as well as emotional regulation, the researcher combined these two components to form one sub-theme. Participants confirmed that KY serves as a tool through which they can soothe themselves in challenging situations to engage in active coping skills.

P5 indicated that she fell pregnant when she was a teenager and did not get any support from her child’s father. She said that KY has helped her to control the intense anger

she felt towards him and they were able to negotiate a way forward. “But now because of yoga it has helped me to see that I don't need to fight anymore I just need to accept this situation and then try to live with it and probably try to understand where maybe he’s coming from”. “Kundalini yoga, the practice itself, it has helped me to own up to things, not always to be frustrated if things don’t go my way so now, I think I own up, I accept” (P5). It was evident that KY helped her to take responsibility of her own actions and re-assess the situation, taking into consideration her own role in it. P2 explained “as soon as I find myself in that situation I need to be creative, this is happening, what must I do, not trying to change it but trying to be creative on how to target it” and “Know what the root is then you can approach it”. His perspective clearly shows active coping skills as described by Folkman and Moskowitz (2004) in that it includes the acceptance of a situation and positive reframing as well as addressing the root of the problem rather than avoiding it.

P3 found that she is more accepting of her own limitations: “If I see this is too heavy for me, I will take that load off, and hand it over to someone else”. She also found that she could use certain techniques from KY to help her handle conflict more effectively. “When it comes to a situation, now I’m more aware of how to handle it … one of us has to come to be calm … so through breathing …. breathing it helps me a lot”.

P6 found that her connection with herself has helped her to view change and challenges in a more accepting manner. “I look at myself within before I look at myself on the outside so I notice the things, I see the mistakes I did, I see change in a different way, not running away from problems but then accepting them and moving on”. P1 noticed that KY helped her to “calculate my moods before I do something”. She said that when she experiences anger, “whenever I feel like I could just grab something”, or sadness, she does the breathing exercises that they do during KY, which enables her to think clearly. P3 and P4 gave specific reference to the nostril breathing exercise and how it enabled them to calm

down. Nostril breathing is a prominent technique used during KYP where the practitioner restricts one nostril and only breathes through the other, as explained in Chapter 2. According to the PVT, the controlling of the breath allows for increased vagal tone which, in turn, stimulates the parasympathetic nervous system, which initiates a soothing effect (Gerritsen & Band, 2018).

P2 said that KY has helped him to turn inwards and feel his emotions, and therefore helped him to express himself more freely: “It really allowed me to go deep within and really feel what I need to feel and be open to anything and that’s where I started to see myself really cry – because I don’t cry”. Some participants also use KY to elevate their moods. They mentioned that they will use a specific meditation depending on what they need at that moment. “There are certain mantras that I listen to that uplift me that I can connect. And then I do meditation whenever I’m not feeling OK or when I’m sad” (P3). P4 indicated that through KY she is better equipped to control her anger:

> It changes me in somehow where if I see that a situation is going to be bad. I just keep quiet or move away, and then try to just sit and recognise myself where I’m coming from and then I will go to that situation, approach it again, in another way, instead of me attacking.

She shared that she also struggled to express her emotions in a congruent way: “you won’t see me whether I’m happy, or I’m sad, or I’m angry – I’ll be just so quiet and my face will be angry, even though I am happy” (P4). However, KY has helped her to express her emotions in a more congruent manner: “now I can – if I am happy, you’ll see me laughing … if I am not, I’ll just be quiet”. Difficulty in behaviours associated with the social engagement system, like reduced facial affect, is a common feature of trauma survivors. This occurs spontaneously in response to a neuroception of danger in the external environment (Porges, 2011).

P5 mentioned that the disciplinary aspect of KYP has helped her to control her emotions and thoughts: “You know the meditations and also the practice itself … it is disciplined and also it makes you as a person to be disciplined … it disciplined me and put me in the right lane” and “because of Kundalini yoga I was able to fix myself, control my emotions and be able to make wise decisions without being in a rush to make rash decisions”.

P6 said that KY has helped her to humble herself and through that she is able to look at situations differently and analyse her position first before acting. P7 shared the following:

> When I started working at Yoga for Alex last year, I was a person that didn’t feel emotionally … I didn’t express pain … I did the yoga training, that’s when I expressed myself and I was able to face my feelings. I had feelings so yoga helped me to show that I was able to feel my feelings.

When asked what it is about KY that made it possible for him to feel his feelings, he answered the following: “I think being committed to work, working constantly, making sure that you are doing it for yourself to heal, so like I had this goal to achieve in order for me to feel.” It appears that having a set intention when practising yoga enables the healing process, which might be helpful to incorporate into clinical practices and yoga programmes directed to release trauma. Additionally, P7 mentioned that KY has helped him to face stressful situations with specific reference to his studies. “Since I have this special tool that I use, I am able to face each and every nervous situation and write down the exams which is hard writing them online and with the time that is given but I'm able to concentrate and focus because of Kundalini yoga, I’m able to breathe, normalize and focus”. KY has also helped him to communicate better and therefore ask for help in times of need, which facilitates healthy coping skills: “I couldn’t communicate”; however, now, “yes, when I have a problem, I’m able to communicate with people. I’m able to ask for help in certain things”.

Self-efficacy. Self-efficacy refers to the belief in one's ability to achieve certain goals (Maddux & Kleiman, 2016). Furthermore, it reflects the confidence to wield control over one's motivation and social environment (Carey & Forsyth, 2009). Various scholars have confirmed a significant relation between self-efficacy and PTG (Lotfi-Kashani et al., 2004; Mystakidou et al., 2014). It is thought that people with higher self-efficacy are more confident and display a high self-esteem and control over their lives, all of which enable PTG (Lotfi-Kashani et al., 2004). Participants in this study showed improved belief in themselves as well as the related tendencies like self-confidence, as discussed below.

P3 showed increased self-efficacy through her belief that she can rely on herself more: "before I used to rely mostly on people … but now I can rely on myself and I can stand up on my own". P5 shared that "I believe I'm brave, so I'm willing to take a stand in whatever situation", which had not been the case before KY. P2 stated:

> I'm willing to take risks and see where it takes me. It (KY) has helped me because before like I used to be very scared of disappointments. I wouldn't even try but now I can go there and when I don't get what I'm looking for, I'm eager to move on and seek help somewhere else.

Furthermore, he experienced: "This practice really gave me a tool – there is no reason to say I am lost, or there is no reason to say I can't find the path, I can't find the way".

Awareness. KY has enabled all the participants to reach a deeper sense of awareness. The practice helped them tune into themselves and focus on their internal world. Overall, participants found that breathing exercises and meditation serve as tools through which they reach a deeper sense of consciousness. This was evidenced in their reflections. Literature suggests that self-reflection and self-awareness are important vehicles for growth and change (Boyraz & Efstathiou, 2011). P2 attested that "the practice really makes you focus in on yourself, and it really brought some positive energy in my life … things that grows me as a

person". Additionally, KY has helped him to reflect on his own actions "it really gave me an understanding that, at some point, I really need to reframe the whole situation … and see where I should be accountable for my behaviour in that situation", which speaks to enhanced self-awareness. P3 shared that: "before, I didn't pay much attention to me and what I want and what is actually happening inside of me, but now since I started practising Kundalini yoga – I'm aware, I'm conscious". P5 said that "after I've meditated, I'm able to think straight. I'm able to know what it is that I want and what it is that I don't need … just to quieten the space and find myself". P4 experienced that "if you are doing yoga, just by tuning in – you connect to your inner peace, and then you become stronger". Self-awareness has helped her communicate more effectively with others: "I will just go to them and approach them in a nicer way" and "better communicating, if we fight, we sit down, and we fix it, where did I go wrong, or where did that person go wrong, then we solve it".

P6 explained that the mantras that you vibrate into the cosmos, specifically the "breath of fire", helps her to bring focus back: "When you do breath of fire it just brings focus back … I look at myself within before I look at myself on the outside. I now noticed things … I see the mistakes that I did". The "breath of fire" entails a rhythmic pumping of the stomach by focusing on naval movement to and from the spine while you inhale and exhale in a light and relaxed manner. Practitioners are thought to feel the movement of air deep within their lungs and chest area (see https://www.kundaliniyoga.org/lesson_7). P7 shared that "yoga helped me to show that I was able to feel my feelings … I was able to know my feelings, sense my feelings".

Compassion. Gilbert (2010) describes compassion in terms of six traits known as sensitivity, sympathy, empathy, motivation/caring, distress tolerance, and non-judgement. Tingey et al. (2019) suggest that compassion for others and striving to help others contribute to the meaning-making process by increasing a sense of agency and by fostering the belief

that good still exists in the world, despite the suffering. Although future research is required, the abovementioned authors found a correlation between PTG and having compassion for others. Porges (2017) explained that compassion is dependent on the capacity of the vagal system to inhibit sympathetic activity and instil calm physiological states when a person is confronted with pain and suffering. This is thought to project the belief of safety and acceptance of others.

Overall, participants displayed different elements of compassion which are discussed below.

Two participants mentioned that they used to display judgement over others, but the practice of KY has helped them to be more compassionate and understanding of others. P5 indicated that previously she would "just judge, and I can't trust this person, now I'm opening up". Furthermore, P5 said: "I wasn't so understanding you know. I used to want things to be done the way I want. But now since Kundalini yoga, everything, the practice itself, it has helped me to own up to things" and "try to understand where maybe he's coming from." P1 mentioned that: "it has taught me … not to judge… without putting myself in that person's shoes". She also noted that her increased sense of compassion has helped her "communicate more effectively with other people without hurting their feelings and without hurting mine" and "I've learned, people respond in talking in different ways because of different situations or what they think". According to Gilbert's (2010) model, non-judgement refers to the ability to remain accepting of others even though their circumstances, or response to it, give rise to feelings of frustration, anger, fear, or abhorrence.

It became evident that some participants experienced that patience has helped them to have a better understanding of others and their circumstances, which enabled them to show more compassion. "Even if they are different – but I've learned to be patient with people and to get where they come from" (P5). Other participants experienced growth in their ability to sympathise and empathise with others, for example, P7 found that "yoga helped to … being

close to people, understand their feelings how they are feeling … able to see … to listen to other people's perspectives … able to sympathise with other people" and "present myself to be in that situation, in her shoes".

Additionally, P7 displayed growth in his need to help others: "I had to become aware of her situation and be that person to help her, to motivate her in a way". Literature suggests that compassion and forgiveness are closely linked where people who experience compassion are known to also express forgiveness (Worthington et al., 2005). Empirical studies support the relationship between forgiveness and PTG (Wade et al., 2017).

P6 indicated "I hardly ever forgive … but since I've been growing into the Kundalini, I've been learning and improving in that area". She explained: "When you connect with yourself it makes it easy … especially during meditation. To realise that the pain that it does to you that you have to let it go … when you allow it (forgiveness)".

Recognising New Possibilities

Researchers have confirmed that people who experience PTG often show a desire to learn new skills, pursue different career paths that are mostly selfless in nature, and focus on health and wellbeing (Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 1996). The participants' experiences in this regard are presented below.

P2 started participating in new leisure activities: "I started things that really will move me, grow me, ground me – like reading. Doing activities that would really bring life to my mind, you know", "like playing Scrabble – I hated it … especially growing up in Alex … we are not really exposed to such activities". P7 said that KY, especially the meditation that he does every morning, has provided him with a platform to discover new interests like "new practices, maybe new music". Researchers confirmed that participation in leisure activities helps people experience life satisfaction and well-being (Anderson & Heyne, 2016;

Carruthers & Hood, 2007). Arai et al. (2008) found that recreational activities played a supportive role in the healing process after trauma to facilitate PTG.

P2 became more interested in a healthy lifestyle: "More specifically with nutrition, food wise. And also noticing that your body needs to be physically fit. Because I started having interest in in fitness and health after practising Kundalini yoga". P3 found a new career path because KY helped her become more aware:

> Now my eyes are open … but I wasn't aware of it. I was just the kids they would be coming with their homework and I would be assisting them but not being that sure that actually this is real value. This is what you love and that is the gift that God granted you to help the kids.

The teachings of KY put a strong emphasis on serving others which has influenced participants to engage in selfless acts.

> Well in Kundalini yoga, doing the trainings that we have … we are taught like, there's a time we do service. We become servers, like practise giving instead of receiving. And most of the time I used to like to receive … but then I saw it feels more pleasurable to give. (P6)

Another participant said: "Even career wise I've changed now that I'm looking at things that I can help out be it my community" (P1).

Spiritual Change

Literature suggests that spiritual growth in the context of trauma refers to an increased sense of universal existence, a greater sense of one's religion or religious beliefs, a feeling of being connected to something greater, or a spiritual pursuit to acquire answers to existential questions (Tedeschi et al., 1998).

Shaw et al. (2005) have found that placing one's faith in a higher entity can provide a sense of meaning and purpose in life. People who go through challenging experiences are

often confronted with existential questions about life. It has been confirmed that spirituality and intrinsic religious commitment are significant predicting factors of PTG (Cadell et al., 2003; Park et al., 1996). However, trauma survivors do not need to be actively religious to experience growth in the spiritual aspect of their lives because PTG is also nurtured by non-theistic beliefs (Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 2004). Participants experienced spiritual change either related to religious growth or non-theistic views as is evident in their statements below.

P2 experienced that "since I'm exposed to spirituality, it gave me that opportunity to love and accept things the way they are". P4 found that she is moving away from religion and associates more with spirituality: "I want to just connect to a Yogi path, be a Yogi now. Slowly and slowly I'm moving away." Regardless of the shift from religion to non-theistic beliefs, the researcher argues that she experienced spiritual growth which indicates PTG. P6 finds that spirituality provided her with a tool to connect with herself and therefore she can form a deeper connection with the God that she worships. "I use Kundalini yoga as a technique … it does deepen your spiritual life and then it connects you with the God that you worship". She found that her religious faith has been strengthened: "It has. Because now you notice the importance of connecting – to bring your soul". Additionally, P7 experienced that "Kundalini yoga enlightened me into the spiritual world to understand more".

Conclusion

In this chapter, the researcher discussed the results of the analysis and connected it with the research question and literature. Seven participants who have been exposed to adversity in the past and were practising Kundalini yoga at the time of the study were interviewed. The Adverse Childhood Experience questionnaire was used to measure the extent of trauma exposure while the Posttraumatic Growth Inventory – Short Form was used to guide the discussion on participants' experience of PTG as a result of KY. Thematic

analysis was performed to interpret and organise the data from the semi-structured interviews. The researcher identified the following themes: gratitude, interpersonal relationships, personal strengths, recognising new possibilities, and spiritual change. “Interpersonal relationships” was divided into two subthemes: interest in connection and enhanced relationships with others. “Personal strengths” was also divided into subthemes: active coping skills, self-efficacy, awareness, and compassion. These themes were discussed in conjunction with literature to delineate how the participants’ experiences of KY fostered PTG. Chapter 5 will include the conclusions derived from these results.

CHAPTER 5

Findings, Recommendations, and Conclusion

Introduction

This chapter describes the conclusion derived from the findings of this study. The aim was to explore trauma survivors' experiences of Kundalini yoga (KY) in the fostering of post-traumatic growth (PTG). The general population in South Africa is at high risk of being exposed to potentially traumatic events while access to conventional psychotherapy is extremely limited (de la Porte & Davids, 2016). The researcher undertook the study to investigate the benefits of KY as an alternative approach to support trauma survivors that can be delivered to larger groups by a non-professional trained in psychotherapy.

A generic qualitative design was implemented to gain a sound understanding of the experiences of the seven participants (Whittemore & Melkus, 2008). The data collected during individual semi-structured interviews was analysed through thematic analysis. Participants' accounts were organised into themes and subthemes to delineate their experiences. The researcher included literature that related to predicting factors of PTG as well as the neurological shifts that contribute to these factors. Stephen Porges's polyvagal theory (PVT) was used to describe the neurological changes that are fostered by KY practices, which explains the physiological platforms that facilitated growth. This chapter also presents the limitations of the study, future recommendations, and the researcher's reflections on the process.

Summary of Results

The results of this study confirmed that the use of KY has been beneficial in the promotion of PTG for all participants. The five main themes related to PTG were: 1) gratitude, 2) interpersonal relationships, 3) personal strengths, 4) recognising new possibilities, and 5) spiritual change. The theme interpersonal relationships was divided into two subthemes: interest in connection and enhanced relationships with others. The theme

personal strengths was also divided into subthemes: active coping skills, self-efficacy, awareness, and compassion. Each of these aspects is supported by literature to facilitate PTG. Below is a summary of the findings in the promotion of PTG in this study.

Gratitude

Gratitude entails the appreciation of aspects of daily life, thankfulness, and joy for that which you have received, from oneself, others, and nature (Emmons & Shelton, as cited in Kim & Bae, 2019; Watkins et al., as cited in Kim & Bae, 2019). This type of appreciation has been found to promote PTG through the enhancement of deliberate ruminations. These purposeful cognitions facilitate positive conceptualisations and self-growth (Tedeschi & Calhoun, 2004).

Participants in this study attested to an increased sense of gratitude towards life, others, and themselves. They found that KY provided them with a quiet space where they could meditate and identify their thoughts, which enabled them to reach a deeper awareness and subsequently a deeper notion of appreciation. These practices facilitated feelings of contentment which also contributed to self-appreciation. Additionally, two of the participants mentioned that the prescribed teachings of KY helped them to reach a deeper gratitude for others because they regard others as themselves. As mentioned in Chapter 4, these teachings are referred to as sutras and each of them has a specific intention; one being that you should regard others as yourself.

Interpersonal Relationships

People's social interactions and adaptive behaviours rely on the evaluation that is made by one's nervous system regarding the extent of safety in the environment. Trauma survivors have been found to function with a nervous system that does not always accurately evaluate the situation. This is due to low functioning of the vagus nerve, also referred to as low vagal tone. This is problematic for social engagement because accurate neuroception is

crucial for prosocial engagement to occur (Porges, 2011). This explains why trauma survivors experience a disconnection with others, because their nervous system is detecting threat even in the absence thereof. Participants who experienced growth in their ability to form significant interpersonal relationships are thought to have increased their vagal tone through the practice which, in turn, allowed for connection with others. Numerous studies have confirmed that improved connection correlates positively with PTG (Buckley et al., 2018; Mapplebeck et al., 2015; ShakespeareFinch et al., 2013; Tedeschi & Calhoun, 2004; Vanhooren et al., 2017). In this study, the researcher found that participants experienced growth in their interest to connect with others as well as enhancement in current relationships.

Interest in connection. The participants attested that KY has helped them to cultivate more interest in others' lives and created the opportunity for them to form connections with others, which was not possible before. KY helped participants become aware that they are emotionally isolated from others which instigated curiosity and a shift towards connection.

Enhanced relationships. Participants perceived others as being more supportive, which initiates cognitive processes that facilitate PTG (Tedeschi & Calhoun, 2004). Stephen Porges (2011) believed that people with poor social engagement systems have inner ear difficulties which make it challenging for them to perceive others as supportive. Evidently, these participants showed stimulation of their social engagement system by perceiving others as caring. They also experienced an increased sense of trust in others because KY provides a platform where one can feel comfortable with oneself and associate with others. KY has helped them to feel more comfortable in expressing themselves, which increased their ability for self-disclosure. The latter is important because it initiates higher emotional connection and feelings of intimacy (Tedeschi & Calhoun, 2004).

Participants also noted that KY has helped them to engage in the process of introspection which has been strongly associated with PTG (Shakespeare-Finch et al., 2013). This allowed them to re-evaluate existing relationships and caused some to become more meaningful, while others that did not serve them weakened or ended.

Three participants experienced that they feel especially connected with others while they practise together as a group, whether it was with people in their class or their family at home. Therefore, it can be concluded that KY serves a valuable purpose in bringing people closer to one another which facilitates growth.

Personal Strengths

Tedeschi and Calhoun (2004) confirmed that personal strengths are strongly related to PTG. The participants in this study experienced growth in their personal strengths related to active coping skills, a drive towards development, self-reliance, communication skills, awareness, and compassion.

Active coping skills. Active coping strategies include problem-focused coping and emotion-focused coping which have both been found to play a vital role in the development of PTG (Bussell & Naus, 2010).

Participants found that KY has helped them to humble themselves and accept difficult situations which allowed for positive reframing of challenging circumstances. Additionally, they focus more on addressing the root of the problem and recognising their own responsibilities when approaching challenges. These processes are an integral part of active coping as described by Folkman and Moskowitz (2004).

They also experienced that they are better equipped to regulate emotions like anger and sadness. KY proved to serve as a tool that practitioners can use to soothe themselves in challenging situations to engage in active coping skills. Specific references were made to the breathing exercises of KY in that they helped the participants to calm down and think clearly

when faced with conflict and other stress-provoking situations. Evidently, it provided them with a tool to aid focus and concentrate. According to the PVT, the controlling of the breath allows for increased vagal tone which, in turn, stimulates the parasympathetic nervous system, which initiates a soothing effect (Gerritsen & Band, 2018).

Other dimensions of emotional regulation were also mentioned in the study, one of which was enhanced acceptance of one's own limitations. KY helped these trauma survivors experience their emotions more deeply, which enabled them to express themselves more freely and in a way that is congruent. Difficulty in behaviours associated with the social engagement system, like reduced facial affect, is a common feature of trauma survivors. This occurs spontaneously in response to a neuroception of danger in the external environment (Porges, 2011). However, these participants underwent neurological changes that increased their vagal tone, which moved them out of the fight, flight, or freeze states to promote emotional articulation and congruency.

Some participants found that KY not only helped them to calm down but that they could use certain meditation practices to elevate their mood. Prosocial physiological states, as controlled by the vagal nerve, is a fundamental part of emotion and mood regulation (Porges, 2017).

It appears that having a set intention when practising yoga enables the healing process, which might be helpful to incorporate into clinical practices and yoga programmes directed to release trauma.

Self-efficacy. Literature suggests that self-efficacy is closely related to confidence, self-esteem, and the control over one's life which, in turn, enables PTG (Lotfi-Kashani et al., 2004). Various participants in this study showed an increased sense of self-efficacy in various ways. Literature proposes that there exists an indirect link between self-efficacy and

increased vagal tone because self-efficacy requires emotion and attention regulation which, in turn, requires high vagal tone (Martens et al., 2008).

Participants experienced that KY helped them to become more confident in their own abilities to succeed. They attested that they are more self-reliant and less afraid of disappointments and therefore willing to take more risks.

Awareness. According to the participants, KY has enabled them to reach a deeper sense of awareness by showing them how to turn their gaze inwards and focus on the internal world. They gave specific reference to the breathing exercises and meditations which helped them reach a deeper state of consciousness. Literature suggests that self-reflection and self-awareness are important in the fostering of growth and change (Boyraz & Efstathiou, 2011). The PVT explains that when humans are more present in their bodies and have a deeper sense of momentary muscular tension, they are better equipped to shift from a shutdown state into more active functioning (Porges, 2011).

Participants were better equipped to reflect on their own actions and when they should be held accountable for their actions, which speaks to enhanced self-awareness. This allowed them to think clearly and identify what they want and need in their lives, which increased agency. They mentioned that self-awareness helped them to feel strong and empowered, which aided better communication with others because they were able to carry themselves better than before. Specific reference was made to the "breath of fire" that was explained in Chapter 4. This breathing technique helped participants bring focus back to the self, which enabled self-awareness. Lastly, greater self-awareness was also noted to enhance emotional awareness and therefore active coping skills, as discussed in the previous subtheme.

Compassion. Compassion aids PTG in that it contributes to meaning-making processes by increasing self-agency and the belief that good continues to exist in the world despite suffering (Tingey et al., 2019). Compassion is believed to be dependent on the

capacity to recruit the vagal system to foster calm physiological states while inhibiting sympathetic activity in times when confronted with pain and suffering to project the notion of safety and acceptance of others (Porges, 2017).

The participants attested that KY helped them to become more compassionate in various ways. Some noted that the practice helped them become less judgemental towards others and to rather take an objective approach displaying understanding for the other person's point of view and context.

Participants experienced that patience served as a vehicle through which they could reach a deeper understanding of others' circumstances, which enabled compassion. Others found that they were better able to sympathise and empathise with others and displayed a newfound need to help those in need. KY also assisted participants to forgive others, because it helped them connect to themselves and realise the damage holding on to their grudges has done. Forgiveness as a construct is closely related to compassion (Worthington et al., 2005).

Recognising New Possibilities

Trauma survivors who experienced PTG often display the desire to acquire new skills, pursue selfless career paths, and focus on health and wellbeing (Shakespeare-Finch et al., 2013; Tedeschi & Calhoun, 1996). New possibilities also include leisure activities which contribute to life satisfaction and well-being and support PTG (Anderson & Heyne, 2016; Arai et al., 2008; Carruthers & Hood, 2007).

KY has helped the participants to discover new interests like playing scrabble or new types of music. Some of them also became more interested in living a healthier lifestyle through the teachings and bodily practices of KY. One of the teachings of KY places strong emphasis on serving others, which influenced some of the participants to become interested in selfless careers where they can help out in their communities.

Spiritual change

Participants experienced spiritual change in the form of religious growth as well as non-theistic beliefs. It has been confirmed that spirituality, intrinsic religious commitments, and non-theistic views are significant predictors of PTG (Cadell et al., 2003; Park et al., 1996).

KY provided a platform through which one could explore spirituality, which was found to help participants reach a deeper sense of love and acceptance. Participants found that they were able to become more spiritual through KY, which helped them to form a deeper connection with God, thereby strengthening their religious faith. One participant found that KY has enlightened him to be more connected to the spiritual world and understand more about the universe.

Limitations of the Study

The sample group of this study had certain distinct characteristics that need to be taken into consideration when carrying these results over to another group in a similar context. All these participants had recently finished their KY teacher's training at the time of the interviews, which means that they underwent extensive training and were practising yoga on a regular basis. These features most probably had a positive effect on their reported growth. Therefore, one must be careful to generalise the findings to a group that did not go through the KY teacher's training. Additionally, although the sample group size falls within the suggestions made by Braun and Clarke (2013) for a minor dissertation, a bigger sample size would provide richer information.

It was also noted in the interviews that the participants attended life-skills workshops at the non-profit organisation through which they did the training. Therefore, some of the positive experiences might have been influenced by these sessions and not by KY. Lastly, the

participants had a strong relationship with the KY teacher who facilitated the training outside of the training sessions, which could have also contributed to growth.

Recommendations for Future Studies

Some of the participants in this study mentioned that although they were introduced to KY while they were still in school, they were not as interested at first. They were sceptical and it took them a while to commit to the practice. It would be valuable to explore the initial perceptions of KY of children from low socio-economic areas because it will give insight into possible barriers that might prevent young trauma survivors to gain support from KY in fostering PTG.

As previously mentioned, the participants of this study were all recently-trained KY teachers. Therefore, it would be valuable to enquire about the experiences of trauma survivors who practise KY but have not gone through the training process. This will provide a wider understanding of the positive effects of KY and PTG.

Reflections

This study has given me the opportunity to explore peoples' experiences which have not been reported on in previous studies. From my first meeting with the organiser of the non-profit organisation, it was evident that KY caused a shift within these people's lives. However, it was noted by some participants that they had received criticism, especially from the elders in the community, for doing KY. Despite the criticism, they felt strong enough about the positive effects of the practice and did not perceive this as a barrier to their development.

As mentioned earlier, the interview process had to be moved to a virtual platform due to geographical restrictions enforced to prevent the spread of COVID-19. The idea of doing the interview over WhatsApp was quite daunting, because I get uncomfortable quite easily when I talk over the phone. Nonetheless, the WhatsApp video call worked well and the

participants and I were able to engage efficiently. I found that it worked better to give them the consent forms to complete prior to the interview to save time. Some participants also completed the ACEs beforehand, which also worked better because of the disclosure of sensitive information. I experienced that they found it easier to do it by themselves in their own space rather than answering the questions out loud during an interview. One of the participants looked quite confused while we were doing the ACEs and I had to explain to her again why this questionnaire is necessary and how it will be reported on in the study.

I also found the feedback session to be very helpful. I spoke to each participant over the phone after I had done the thematic analysis but prior to my write-up, just to ensure that my interpretations of their accounts were accurate. I was delighted to find that, for the most part, my interpretations were correct, and they were excited for me to write about their experiences. This enabled me to do my final write up with confidence, which was very helpful during this challenging step of the process.

Overall, I was humbled to see how passionate the participants were to share their experiences with me and other people reading my dissertation.

Conclusion of the Thesis

Research has confirmed that the prevalence of traumatic events in South Africa is very high with over 70% of citizens having been exposed to a potential traumatic event (Atwoli et al., 2013; de la Porte & David, 2016). Therefore, trauma support is highly needed in the local context. Most literature supports the use of cognitive behavioural therapy and psychodynamic therapy to treat trauma-related disorders (Kaminer & Eagle, 2017). However, there is a limited amount of professionals who can deliver these therapeutic interventions, which calls for alternative approaches that allow treatment to be delivered at the community level by non-professionals to increase accessibility to trauma support (Bruckner et al., 2011; Mendelhall et al., as cited in Kaminer & Eagle, 2017). Although limited evidence is available

to validate its effectiveness, literature shows that yoga is the most widely used complementary treatment for trauma survivors. However, most of these studies have been conducted in the United States of America, limiting its generalisability to other contexts (Price et al., 2017; Rousseau & Cook-Cottone, 2018; Sullivan et. al., 2018). Therefore, this study adds to the limited body of knowledge on the use of yoga, more specifically KY, to promote PTG globally as well as in the South African context. Although KY is used in conjunction with conventional therapies at selected mental healthcare centres, no formal study, to date, has enquired about the effects of KY on PTG in the South African context (Recovery Direct, 2020). This further shows the significance of the present study in the South African context.

The researcher was particularly interested in whether KY can serve as a tool to aid PTG in trauma survivors and was able to answer the research question from the interpretation of the sample group's experiences. The participants confirmed that KY promoted PTG in various domains of functioning in their lives. These domains included an enhanced sense of gratitude, improved interpersonal relationships, personal strengths, the ability to recognise new possibilities, and spiritual changes. KY is thought to initiate neurological shifts as explained by the PVT which poses as an explanation for PTG on a physiological level.

The findings add to the body of knowledge that supports the use of mind-body practices as a complementary approach to support trauma survivors to process and overcome their adversities. KY was found to promote PTG in practitioners, which is valuable to healthcare workers who deal with trauma in that they can refer their clients to partake in KY practices to help build opportunities for growth.

This study not only confirms the efficacy of KY in the promotion of PTG, but also shows that this practice can be implemented across different socio-economic backgrounds and cultures. This South Asian practice is often reserved for racially distinctive elites and

upper-middle-class people who can afford the classes (Miller, 2017). Additionally, research found that yoga is mostly practised by non-Hispanic groups (Clarke et al., 2015). The sample group of this study were all black Africans who resided in Alexandra, a township that is densely populated and subjected to poor service delivery, high rates of unemployment, and among the top ten precincts of crime in Johannesburg (Crime Stats SA, 2018; Ebrahim, 2019). These testimonies of growth show that KY can be implemented across cultures and socio-economic backgrounds.

Overall, the results of this study are valuable to the body of knowledge on non-conventional therapies, evidence supporting the use of KY to foster PTG, and the efficacy of such an intervention across cultural groups and different socio-economic backgrounds.

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Appendix A: Demographic Information

Name of Participant _____

Age _____

Date of interview _____

Consent given: _____

How long have you been practicing Kundalini Yoga: _____

How often do you practice Kundalini Yoga: _____

Adverse Childhood Experience (ACE) Questionnaire

In your life:

1. Did a parent or other adult in the household **often** ... Yes / No

   Swear at you, insult you, put you down, or humiliate you?

   or

   Act in a way that made you afraid that you might be physically hurt?

2. Did a parent or other adult int he household **often** ... Yes/No

   Push, grab, slap, or throw something at you?

   or

   Ever hit you so hard that you had marks or were injured?

3. Did an adult or person at least 5 years older than you **ever**... Yes/No

   Touch or fondle you or have you touch their body in a sexual way?

   or

   Try to or actually have oral, anal, or vaginal sex with you?

4. Did you **often** feel that ... Yes/No

   No one in your family loved you or thought you were important or special?

   or

   Your family didn't look out for each other, feel close to each other, or support each other?

5. Did you **often** feel that ... Yes/No

   You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

   or

   Your parents were too drunk or high to take care of you or take you to the doctor

   if you needed it?

6. Were your parents **ever** separated or divorced? Yes/No

7. Was your mother or stepmother: Yes/No

Often pushed, grabbed, slapped, or had something thrown at her?

or

Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes/No

9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes/No

10. Did a household member go to prison? Yes/No

Post-Traumatic Growth Inventory-Short Form

I experienced this change as a result of Kundalini Yoga…

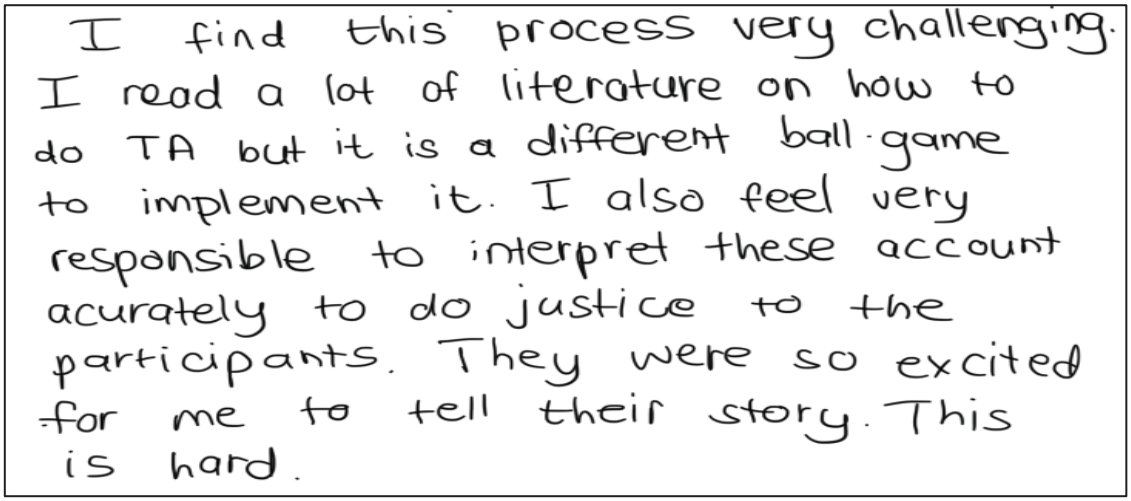
Possible Areas of Growth and Change
1) I changed my priorities about what is important in life.
2) I have a greater appreciation for the value of my own life.
3) I developed new interests.
4) I have a greater feeling of self-reliance.
5) I have a better understanding of spiritual matters.
6) I more clearly see that I can count on people in times of trouble.
7) I established a new path for my life.
8) I have a greater sense of closeness with others.
9) I am more willing to express my emotions.
10) I know better that I can handle difficulties.
11) I am able to do better things with my life.
12) I am better able to accept the way things work out.
13) I can better appreciate each day.
14) New opportunities are available which wouldn't have been otherwise.
15) I have more compassion for others.
16) I put more effort into my relationships.
17) I am more likely to try to change things which need changing.
18) I have a stronger religious faith.
19) I discovered that I'm stronger than I thought I was.
20) I learned a great deal about how wonderful people are.
21) I better accept needing others.

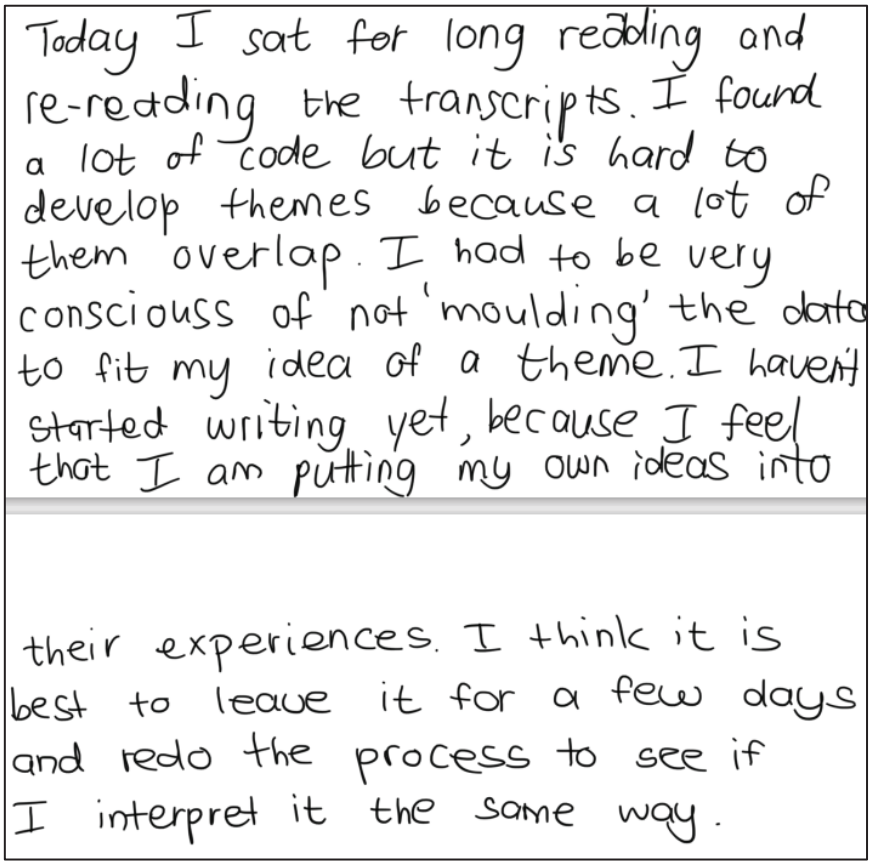
Appendix B: My Interview Experiences

I was quite nervous because it was my first interview. I think I jumped into the questions to quickly, for example I forgot to say that there is no right or wrong answer. I had to constantly remind myself not to get involved in her story. I might have posed some questions in a leading way → I will consider then when I do my analysis. I also got a bit emotional in the middle of the interview, because she was so brave and well spoken when I know how bad her circumstances must be. The consent forms were a bit of a disruption. I will send it beforehand next time.

I feel very good about this interview. Completing the consent forms before the meeting works better.
He asked me to explain some questions to him → I would be more prepared for this in the next interview. It was easier for me to create a space where the participant could talk → silent moments.
He also completed the ACE's before the meeting.

My Thematic Analysis Experiences


I find this process very challenging. I read a lot of literature on how to do TA but it is a different ball-game to implement it. I also feel very responsible to interpret these account acurately to do justice to the participants. They were so excited for me to tell their story. This is hard.


Today I sat for long readding and re-readding the transcripts. I found a lot of code but it is hard to develop themes because a lot of them overlap. I had to be very conscioussness of not 'moulding' the data to fit my idea of a theme. I haven't started writing yet, because I feel that I am putting my own ideas into their experiences. I think it is best to leave it for a few days and redo the process to see if I interpret it the same way.

Today it was better. I am getting more familiar with the data and is able to integrate different parts of the transcripts into coherent themes.

Today I played around with tables. I find it easier to draw similaries amongst the participants' accounts if it is illustrated in keywords in a table where I can play with colour and fonts.

I decided to take another break from the data because I realised I was trying too hard to fit the data into themes rather than the data unfolding by itself.

The break was good. My mind is clear and calm again. I re-read each transcript and compared the information in the tables with the transcripts to double check my interpretations.

Today I started writing my Ch 4. the tables really helped. I find myself still referring to the original transcripts to validate my claims. I read in literature that it is a back-and-forth process, but I did not expect to refer back in the final write-up still.

My Feedback Experiences

I was quite nervous about the feedback, because I really wanted to give a voice to my participants and tell their story as accurately as possible. I was delighted to find them surprised and happy that I was able to articulate their experiences. I know now how important and valuable this experience was for them. They are so passionate about KY and what is has done in their lives.
I am humbled that I was the one who got to tell their story.

Appendix C: Ethical Clearance Certificate

NHREC Registration Number REC-110613-036

UNIVERSITY OF JOHANNESBURG

ETHICS CLEARANCE

Dear Karlita Morrison

Ethical Clearance Number: Sem 2-2019-070

Topic: Trauma Survivors' Experiences of Kunclalini Yoga in fostering Post-Traumatic Growth

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/researcher to submit a new application.
- It remains the student's/researcher'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,

Prof Mdu Ndlovu
Chair: FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE
12 December 2019

Appendix D: Background to the Study Including the Nature of the Research

I, Karlita Morrison, am doing research on trauma. Research is the systemic investigation of an identified subject to answer questions and generate new knowledge. In this study I want to learn more about trauma survivors' experiences of using Kundalini Yoga as a supplementary therapeutic technique to improve emotional well-being and self-regulating. I am inviting you to participate in this research study to contribute to the body of knowledge around this theme.

Traumatic events challenge people's sense of safety by disrupting cognitive patterns and causing negative alterations related to the self, others, the world, and the future. Common initial reactions to a traumatic event include exhaustion, confusion, sadness, anxiety, agitation, numbness, dissociation, confusion, physical arousal, and blunted effect. Trauma survivors can also experience a delayed response which is identified through persistent fatigue, sleep disorders, nightmares, fear of recurrence, anxiety focused on flashbacks, depression, and avoidance of emotions, sensations, or activities that are associated with the trauma.

The desired goal of trauma treatment is to transform intrusive thoughts and feelings that are negative in nature to deliberative thoughts to gain a better sense of control over cognitive processes.

Recent shifts in the academic and medical domains have begun to emphasize the potential to perceive benefits and growth following exposure to trauma. Post-traumatic growth refers to positive psychological progress that a trauma survivor experience after exposure to a traumatic event or highly challenging life circumstances. It can be regarded as a cluster of benefits resulting from a combination of emotional, cognitive, and social processes that are stimulated by a traumatic event.

Trauma survivors are known to feel detached from their bodies. Clinicians who specialize in the treatment of trauma have noted that mind-body therapy is a useful component to improve self-regulation and enhancing the connection between body and mind. Yoga, which entails a component of mindfulness practice as well as physical influences is an example of a mind-body practice that offer tools to help with the negotiation of emotional reactions and triggers, as well as stress. These tools include guided imagery, relaxation training and breathing re-education. More specifically, Kundalini Yoga have been found to decrease post-traumatic stress disorder symptomatology and nurture positive changes in perceived stress, anxiety, and resilience.

The prevalence of potential traumatic events in South Africa have been confirmed to be remarkably high. Due to a history of political violence and an ongoing tendency of interpersonal, community-based, socio-economical violence, the general population in South Africa is at a high risk of being exposed to a traumatic event.

Scholars argue that contexts with limited mental health resources, like South Africa, should consider approaches that allow treatment to be delivered at community level by non-professionals. Although evidence based on alternative treatments like body-oriented approaches, meditation and mindfulness have emerged in literature, very few studies validate the effectiveness of these methods. Body-orientated approaches, like Kundalini yoga, can easily be served at community level without a professional trained in psychology. Another

benefit is that a big group of people can be served in one session as yoga can be practiced in large groups.

Research on the effectiveness of yoga have, for the most part, been conducted in the United States of America where it was found to be successful in reducing the impacts of trauma and other stressors. It is also amongst the most widely used complementary healthcare treatments for post-traumatic stress disorder. Due to the major gaps in documented knowledge regarding alternative methods like yoga and mindfulness, in South Africa, it would be valuable for such a cost-effective study to be explored on

Intention for the project

Research associated with this project attempts to do an in-depth study with trauma survivors, who are currently involved in a Kundalini yoga program, to elicit information on their experiences of the yoga practice in fostering post-traumatic growth.

Ethical Clearance

Permission for this study has been granted by the Faculty of Education Research Ethics Committee of the University of Johannesburg, and consent was given by the founder and manager of the non-profit organization.

Interview Process

Participants who are willing to partake in the study will be invited for two contact sessions over the virtual communication platform, Zoom. Both meetings will be scheduled at a time that is most convenient for the participant. The first session will be scheduled for 1 hour and will consist of the interview conducted by the researcher to find out more about the participants' experience Kundalini yoga, and its potential to facilitate post-traumatic growth. The second session will be scheduled for 20 minutes where each participant will be asked to scrutinize the researcher's interpretation of their experience of Kundalini yoga.

Procedures Involved

There will be no compensation for your participation in the research, however cellular data will be provided to cover the costs for the interviews. Your privacy will always be respected, and you will have the right to control the distribution of personal information. You also have the right to withhold any personal information if you wish to do so. The interview between the participant and the researcher will be conducted in a private room. Although the researcher will encourage the interviewee to answer all the questions, you will not be forced to. You will also be allowed to withdraw during completion of the interview if you should feel that their privacy has been invaded.

Potential Risks

While you might feel uncomfortable, anxious, or stressful, there are minimal risks involved in participating in this study. You might feel emotionally overwhelmed during the interviews and require debriefing from a psychologist. The researcher will provide names and contact details of professionals who can assist with debriefing.

Potential Benefits

Participants have the opportunity to contribute to an important body of knowledge and teach others through their experiences.

Informed Consent

We recognize that participants are not capable of consent unless “informed”. We have, therefore, disclosed the nature of the research, the aims, the duration, the risks and benefits, the nature of interventions throughout the study, compensations where appropriate, research details, and details of the ethical review process. Where appropriate, communities, employers, departments, and other instances are also part of the informed consent.

Confidentiality

During the process, every effort will be made to protect (guarantee) your confidentiality and privacy. I will not use your name or any information that would allow you to be identified. Pseudonyms will be assigned when discussing responses in the research. In addition, all data collected will be anonymous and only the researcher will have access to the data that will be securely stored for no longer than 2 years after publication of research reports, or papers. Thereafter, all collected data will be destroyed. You must, however, be aware that there is always risk of group or cohort identification in research reports, but your personal identity will always remain confidential. You must also be aware that if information you have provided is requested by legal authorities I may be required to comply.

Participation and Withdrawal

Participants will be given the power of free choice in that participation is voluntary and that you have the right to withdraw from the study at given moment during the process. If you decide to withdraw, there will be no consequences to you. Your decision whether or not to be part of the study will not affect your continuing access to any services that might be part of this study.

Future interest and Feedback

You may contact me (see below) at any time during or after the study for additional information, or if you have questions related to the findings of the study. You may indicate your need to see the findings of the research in the consent form.

Researcher

Karlita Morrison

072 594 7313

karlitamorrison7@gmail.com

Research Supervisor

Dr. Veronica Dwarika

veronicam@uj.ac.za

Appendix E: Informed Consent Form

Project Title

Trauma Survivors' Experiences of Kundalini Yoga in fostering Post-Traumatic Growth

Investigator

Karlita Morrison

Date

____ June 2020

Please mark the appropriate checkboxes. I hereby:

☐ Agree to be involved in the above research project as a participant

☐ Agree to be involved in the above research project as an observer to protect the rights of:

- ☐ Children younger than 18 years of age
- ☐ Children younger than 18 years of age that might be vulnerable, and/or
- ☐ Children younger than 18 years of age who are part of a child-headed family

☐ Agree that my child _____ may participate in the above research project

☐ Agree that my staff may be involved in the above research project as participants.

☐ I have read the research information sheet pertaining to this research project (or had it explained to me) and I understand the nature of the research and my role in it.
I have had the opportunity to ask questions about my involvement in the study. I understand that my personal details (and any identifying data) will be kept strictly confidential. I understand that I may withdraw my consent and participation in this study at any time with no penalty.

Signature: _____

Please provide contact details below ONLY if you choose one of the following options:

☐ Please allow me to review the report prior to publication. I supply my details below for that purpose

☐ Please allow me to review the report after publication. I supply my details below for this purpose.

☐ I would like to retain a copy of this signed document as proof of the contractual agreement between myself and the researcher.

Name:_____

Phone or Cell number: _____

e-mail address: _____

VIDEO, AUDIO OR PHOTOGRAPHIC RECORDING

By law, separate consent or assent must be provided to indicate willingness to be video / audio recorded or photographed. Please provide your consent / assent / on this form:

Where applicable:

☐ I willingly provide my consent/assent for using audio recording of my/the participant's contributions.

☐ I willingly provide my consent/assent for using video recording of my/the participant's contributions

☐ I willingly provide my consent/assent for the use of photographs in this study.

Signature (and date):

_____

Signature of person taking the consent (and date):

_____

Appendix F: Example of Coding

K - Okay. So I'm gonna ask you questions around Kundalini yoga. So it's quite specific questions. But we are going to, you know, go off track, and that's fine. I just want to get as much as possible out of you. So the first question is - do you feel like you've changed your priorities of what is important in your life because of Kundalini yoga?

P6 - Maybe not changed, but improved - in some areas. Especially when it comes to – I hardly ever forgive. I find it very difficult to do that but then I'm learning that since I've been growing into the Kundalini, I've been learning - improving in that area - polishing it up. Trying to chill out and forgive and ...

K - What about Kundalini yoga makes that possible for you?

P6 - Since you connecting to the inner self … When you connect with yourself it makes it easy. Cause you've got like … especially during meditation. You have all the time to be with yourself. To realise that the pain that it does to you, that you have to let it go. You allow it to happen. It just happens. When you allow it, it happens - when you connect with yourself, it just happens. It makes you easier to be able to accept change.

K - Okay. I hear you. And you feel like it's easy through - you access that through meditation?

P6 - Through meditation, yes. It makes it easier through meditation.

K - Do you feel like you have a greater appreciation for the value of your own life - because of Kundalini yoga?

P6 - Oh, yes yes yes. I feel more content with myself. Like I'm … I feel like there's value in me. I'm able to value myself and see the importance of me. XXX02:37 I'm more appreciative of the level(?) that I have.

K - Mmm. Okay. And you feel like there's been quite a shift because of Kundalini yoga?

P6 - Yes. And before it was XXX02:52 Yoh! I love myself very much but then it was quite hectic to face a few things in my life. To look at myself in the mirror and tell myself I love myself - it was something else … then through Kundalini yoga and ... it helped me see the importance in me. So I'm loving myself even more.

K - I'm gonna ask you once again. What is it about Kundalini yoga that made you appreciate and value yourself more?

P6 - Okay. I'm going to go when we do some mantras that we do. Especially the mantras that you vibrate in the cosmos when … Whenever there's some sort of vibration it feels – there's some sort of shift when I have to …especially with breathing. There's the breath of fire. When you do breath of fire it just brings focus back to when I'm like okay … I look at myself within before I look at myself on the outside. So I noticed the things that … I see the mistakes that I did. I don't push them away. I observe them and I leave with the XXX04:27 This is what I did – its' okay - and I have to change this. I see change in a different way. Not running away from problems but then accepting them and moving on.

K - Okay. That makes a lot of sense. Thank you very much for that. That's very insightful. Would you say that you developed new interests in your life?

P6 - I would say that. I always loved being in front of people … Talking in front of people. But then I realised … One of my passions is dealing with the youngsters. Just being patient to help. Giving back XXX05:22 I've given up(?) that interest like I'm very passionate XXX05:26 Whatever that has to do with giving back, I'm more into it. I love it ...

K - I wonder what made you so passionate about giving back - that you didn't have before?

P6 - Well in Kundalini yoga - doing the trainings that we have - we are taught like - there's a time we do service. We become servers, like practice giving instead of receiving. And most of the time I used to like to receiving, receiving, receiving. But then I saw it feels more pleasurable to give, ja.

K - I'm speculating now. You can say if I'm wrong. I wonder if the yoga doesn't make you feel like you are full so therefore you can give? Cause you know if you feel empty, you can't give on an empty tank.

P6 - Definitely.

K - So would you say that might be a reason why you feel like you can give more, because you ...?

P6 - Definitely. Because the little that you have you feel that I'ts … There's nothing little. Whatever that you have is enough to share. XXX06:57 is enough to share. So just give. You just feel like giving.

K - We should have more … Sorry. My cat always wants to join in :)

P6 - :)

K - We should have more people like you. Okay. Now I want to move on a bit to your sense of self-confidence and self-reliance. Do you feel like you can rely on yourself more, than you could have before?

P6 - Okay. I think it goes with … Sometimes it goes with … Sometimes I feel like I'm - I really like, like I'm really disappointing myself. But I think it's just because of some sort of - the current situation that I'm in. Like if I talk(?) … Like there's just too much on me that I can't handle and I can't even rely on myself. I feel It's too much for me. But then also the times I feel like - you know what - everything's just possible - I can rely on myself, ja.

K - And in times when you feel like it's too heavy - are you comfortable with relying on other people?

P6 - Yes. I am. Definitely I am.

K - Okay.

P6 - I am comfortable but then ... also it's like - cause I hate being a burden(?) to other people. Like I hate making people feel heavy because … I hate having a load onto other people. But then I … When help is needed I don't, like I XXX08:51 I ask for help.

K - Okay. And you trust other people to help you?

P6 - Ja. Yes I do.

K - Okay. And your relationships with other people - how would you describe that? Has there been a change in your relationships with other people?

P6 - The relationships with other people it's - they become more - they become different. You start seeing the relationships more as … Like it's not something that has to do with material things and … You focus more on that person themselves, like … Whenever you with them, it's either you growing each other. Like there's more into relationships than just having to talk about people - gossip ..

K - Ja. So would you say you have a closer connection with people because of Kundalini yoga?

P6 - Ja. There's a different connection now.

K - Do you think that also comes from this self-awareness?

P6 - It comes from like realising that the other person is you. And when you realise that the next person is you, you treat them the way you want them to treat you so … It's like you treating yourself but in another person.

K - Okay. That's a very interesting view. Is that part of the Kundalini practice or … ?

P6 - That's like … Its one of the sutras that they taught us like … You have to realise that the other person is you so with that you get to treat everyone the same.

K - Mmm. That's very interesting. That hasn't come up in any of my interviews. That's very interesting. Would you say that you put more effort into your relationships - with other people?

P6 - Yes. I really love being by myself :) XXX11:12 being with myself. But - I also love being with people. But then people that gonna grow me.

K - Okay.

P6 - I love seeing growth every time. So when I do Kundalini yoga I learn that in each and every person you learn something. Even if it's small - but then you get to grow in the way.

K - Okay. Okay, now I want to move to the spiritual side of Kundalini yoga which has brought up some quite interesting conversations. First of all, are you religious?

P6 - Yes I am.

K - Okay. Are you Christian or … ?

P6 - I'm Christian.

K - Okay. So how do you navigate your religion and the spirituality of Kundalini yoga?

P6 - Well for me … I use Kundalini yoga as a technique. It's more of a technique than … It does deepen your spiritual life and then it connects you with the God that you worship.

K - Okay.

P6 - Ja. I take it more of a technique to face life. It's a tool, for me.

K - Okay. Would you say it has improved your religious faith?

P6 - It has. Cause now you notice the importance of connecting - to bring your soul … Like just - ja. It connects you with the inner you and, ja. So it goes with the religious part. But it's just spiritual though.

K - Mmmm. But you - so you can - So you say you use it to connect to God or Jesus in Christianity ...?

P6 - Through meditation.

K - Through meditation? Okay. I heard. I understand that correctly. Okay. And you expressing your emotions - how are you with that and has that changed through Kundalini yoga?

P6 - A bit :))

K - Its fine :) If it didn't change then that's also fine :)

P6 - A bit. Just a bit. Cause :)) It happens sometimes that if you're being rough then you're going to that level, sometimes :))

K - :)) What level is that?

P6 - :)) If you gonna be harsh, you're gonna push me to be harsh with you.

K - Okay.

P6 - But then sometimes. Okay. It's just sometimes ...

K - Okay :) So not ...

P6 - :) Not every time.

K - :) So you have patience but only up until a certain point?

P6 - Ja :)

K - And when you feel like something isn't right. When You feel like someone isn't treating you right, are you able to express your emotions effectively?

P6 - Yes.

K - Are you?

P6 - I don't want it to sleep. I don't want it to … I want to sleep on it.

K - Okay.

P6 - It has to be dealt with.

K - Okay. Now. And has that always been like that?

P6 - Ja. That has always been like that.

K - Okay. So that hasn't changed much? Would you say you have more compassion for other people than you did before?

P6 - Well … I'm not sure if it's than I did before. Because I didn't have … Maybe it improved a little bit through the practice. Maybe it improved a bit. But I feel it has always been there.

K - Okay. So you've always had the compassion for other people. So if you come across things, we touched on it a little bit - but I just want to go more into. If you come across a situation that you realise needs changing - would you be willing to change it? Would you have the strength to stand up and say : Okay, this needs changing?

P6 - If I am able to, then yes.

K - Okay. And do you feel like that has changed because of Kundalini yoga or not?

P6 - Okay. Before - I wouldn't say I would before … I mind my business :) I mind my business and let it be. I feel it, if I can, why not. I see that it is needed, so why not.

K - So you would intervene?

P6 - Ja. That has shifted because I'd be like - not my business ...

K - Mmm. Not my monkey, not my circus :)

P6 - :)) Ja.

K - Okay. Yoh. We chatted about so many things now, I think … Oh, there's only more thing that I want to touch on.

P6 - Okay.

K - Do you know now that you can handle difficult situations better?

P6 - I do. I know. Still through the practice?

K – Ja. We focusing on that the whole time.

P6 - Ja. You get to learn to humble yourself, right? So you go through the level of the next person. XXX18:21 You go down and just …You first look at … You look at the situation … before you even like - you analyse the situation first. XXX18:39 being mad about it … You just look at it. Cause sometimes it's just … You tend to be angry about some things that's not so even there.

K - Ja. Ja.

P6 - Ja.

K - It seems very overwhelming. But it's actually … If you take a step back ...

P6 - Ja. If you take a step back then you realise that it … It's actually not that bad. Sometimes - the best solutions of that is to keep quiet. Don't raise them to talk :)

K - Ja. Okay. I understand. Ja, I think that's all I … Through the conversation we basically covered everything that we needed to. Is there anything else that you'd like to add, that I didn't ask you perhaps?

P6 - :) Okay another thing with the practice … especially when it comes to - cause I work most with the Grade 8's and Grade 2's. There's defiant children. Like the ones that - they very defiant. Like they cannot be told what to do. And there's those who are shut down. So most of the times when we, before we start with the programme, we start with breathing exercises and a bit of meditation just to set the mood. Cause if we don't do that - its either this - that one that's gonna be in a freeze mode not saying anything. Or they just withdraw. They just shut down.

K - Ja.

P6 - We cannot deal with … We cannot manage to calm them down, so …

k - Okay.

P6 - Through the meditation or the breathing exercises we set the mood to be XXX21:08

K - And that helps?

P6 - It helps.

K - I just wish that schools would do that every morning - honestly.

P6 - Ja :)

K - Do you see a difference in the kids?

P6 - After the breathing exercises?

K - After practicing Kundalini yoga when they go into school. Like is there … Do the teachers say that the kids are more willing to learn or they more disciplined?

P6 - Ja. They do. They do say that. Okay well, apart from the children themselves, not the teachers, the thing helps them to concentrate even more.

K - Okay.

P6 - Especially the breathing exercises and the meditation.

K - Helps them?

P6 - Ja. We often do the breathing exercises, mostly before they write exams.

K - Ooh. That's very nice. Okay.

P6 - Ja.

K - Ja. Just to contain ... - so they also feel contained, I guess?

P6 - Yip. It helps them relax.

K - Especially kids with behavioural problems. Do you see a difference in them?

P6 - Bit by bit. It takes a lot of work to make a huge change in them. The big change you're going to see its immediately after like - during or after the practice - you can see that there's calmness - they can be able to contain themselves.

K - Mmm. Okay so there's a bit more emotional regulation going on?

P6 - Ja. Cause a lot of defiant children … It's for a number of reasons. Some of them need attention. Could be that they not getting enough attention from their families or whatever. So they need that attention. We give them - most of them, we give them responsibilities, so that they feel in charge. Maybe to help with the class or so that they calm themselves down. They be able to be even with everyone.
…

End

Appendix G: Example of Thematic Analysis

Participant 6				
Personal Growth			Interpersonal Relationships	Life Philosophy
greater appreciation of life	recognising new possibilities in life	personal strength		
Self-appreciation I feel more content with myself. I feel like there's value in me through Kundalini yoga and ... it helped me see the importance in me. So I'm loving myself even more There's nothing little. Whatever that you have is enough to share **Appreciation for others** in each and every person you learn something	**New passion** But then I realised … One of my passions is dealing with the youngsters. Just being patient to help **Serving others** in Kundalini yoga practice giving instead of receiving then I saw it feels more pleasurable to give	**Forgiveness** I hardly ever forgive since I've been growing into the Kundalini improving in that area When you connect with yourself it makes it easy When you allow it, it happens **Accept change within yourself** when you connect with yourself, it just happens. It makes you easier to be able to accept change. its' okay - and I have to change this. I see change in a different way. Not running away from problems but then accepting them and moving on. **Self-awareness** the mantras that you vibrate in the cosmos when … Whenever there's some sort of vibration it feels – there's some sort of shift breath of fire brings focus back I noticed the things … I see the mistakes that I did. I don't push them away **Emotional Regulation** You get to learn to humble yourself, right You look at the situation … before you even like - you analyse the situation first Cause sometimes You tend to be angry about some things that's not so even there	**Deeper connection** it's not something that has to do with material things and … You focus more on that person themselves **Treat other people** Its one of the sutras that they taught us like … You have to realise that the other person is you so with that you get to treat everyone the same **Growing friendships** Whenever you with them, it's either you growing each other. there's more into relationships than just having to talk about people – gossip. also love being with people. But then people that gonna grow me.	**Improved religious connection with God** I use Kundalini yoga as a technique deepen your spiritual life and then it connects you with the God that you worship you notice the importance of connecting connects you with the inner you So it goes with the religious part.

Her own experience teaching KY to children

There’s defiant children. Like the ones that - they very defiant. Like they cannot be told what to do. And there's those who are shut down. So most of the times when we, before we start with the programme, we start with breathing exercises and a bit of meditation just to set the mood. Cause if we don't do that - its either this - that one that's gonna be in a freeze mode not saying anything. Or they just withdraw. They just shut down. We cannot deal with … We cannot manage to calm them down, so …

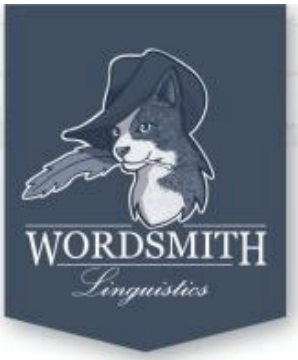
Through the meditation or the breathing exercises we set the mood to be

thing helps them to concentrate even more

The big change you're going to see its immediately after like - during or after the practice - you can see that there's calmness - they can be able to contain themselves

We give them - most of them, we give them responsibilities, so that they feel in charge. Maybe to help with the class or so that they calm themselves down

Appendix H: Certificate of Language Editing



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23 October 2020

To whom it may concern

This is to testify that the master's dissertation titled

'Trauma survivors' experiences of Kundalini yoga in fostering post-traumatic growth'

by

Karlita Morrison

has been professionally language edited.

The language practitioner in question is registered at the South African Translators' Institute (SATI) with membership number 1003382 and thereby fully qualified and authorised to provide said services.

Should there be any queries, please feel free to contact the language practitioner at the number provided below.

Kind regards

Elcke du Plessis-Smit (I.D. 9212030060083)

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Appendix I: Similarity Report