



**Exploring paediatric occupational therapists'
knowledge and use of mindfulness as a self-regulation
strategy for children in middle childhood**

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Mini-dissertation submitted in partial fulfilment of the
requirements for the degree Masters of Arts in Positive
psychology at the North-West University

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Graduation May 2018

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Acknowledgements

A very special gratitude goes out to my supervisor Dr. Van Schalkwyk. For the last three years, you have been unfailingly present, attentive and encouraging. You kept me going when times were tough, asked insightful questions, and offered invaluable advice. You consistently allowed this paper to be my own work, but steered me in the right the direction whenever you thought I needed it. Your enchanting strengths of zest, love and kindness became the backbone on which I depended throughout the process. Thank you!

I would also like to thank the experts who were involved in this research project: Dr. Fadiji and Mrs. J Stacey, without your passionate participation and input, the research could not have been successfully conducted.

A special mention to Nestus Venter, for his endearing kindness and detective skills in helping to track down journal articles when requested (which was often). To Prof. M. Wissing and Dr. L Schutte, thank you for taking me on board and accepting me into the program. It was fantastic to have the opportunity to work alongside such trailblazers in the field of Positive Psychology.

I am also grateful to my family members and friends who have supported me along the way. Finally, last but by no means least,

To my person, my mother Lynn Van't Hoff: because I owe it all to you. Forever interested, encouraging and always enthusiastic. Thank you for your joy whenever a significant moment was reached, for the sacrifices made, and for the moral and emotional support. You exemplify so inherently the strengths of curiosity, love of learning and perspective, all of which I have tried to use in setting the tone for this thesis.

So much of you is in me. Your mantras, taken from the late Chris Peterson, "that other people matter and do the right thing", are two benchmarks that I continually aim to live by. Thanks for all your encouragement!

Summary

The aim of this research was to explore paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. It has been proposed by researchers that mindfulness can be cultivated as an internal self-regulatory resource to foster resilience, resourcefulness and well-being (Kabat-Zinn, 2013). The topic of mindfulness therefore fits well within the tapestry of Positive Psychology (PP) and its intention to investigate ways to promote the well-being of individuals and communities (Seligman & Csikszentmihalyi, 2014).

The profession of PP and Occupational Therapy (OT) both coincide with their pragmatic focus on enhancing well-being. Occupational therapists (OTs) believe that: "Man, through the use of his hands, as they are energized by mind and will, can influence the state of his own health." As a result from this founding belief, OTs use occupations and meaningful engagement in occupations to promote well-being (Townsend & Polatajko, 2007, p. 14). Although recent researchers are starting to investigate the compatibility of positive emotions, flow, mindfulness and hope within the practices of OT, there is little research to date that investigates how mindfulness is used by occupational therapists particularly for children in middle childhood (Reid, 2011).

A qualitative descriptive design was used and ten participants in the Cape Peninsula area (Western Cape Province) participated who complied with the inclusion criteria. Data were collected via semi-structured interviews; thematic data analysis was conducted and four main themes were identified.

Findings reveal OTs unique understanding of self-regulation which focuses largely on the sensory domain. OTs refer to this bottom-up process of self-regulation (sensory regulation) in order to help achieve a state of mindfulness. When it comes to the use of mindfulness in practice, OTs stressed the importance of using the senses, the role of education, and taking the environment into account. The findings also indicate that OTs view mindfulness as a

critical skill, applicable to both clinical and non-clinical populations of children in middle childhood.

As this is a qualitative and a small sample study, constraints do apply to generalizability of the study and utility of findings in practice. However, a possible noteworthy contribution of this study is that the OT profession offers a unique understanding of self-regulation (taking into account the biology of psychology) as well as pragmatic approaches to using mindfulness as a self-regulation strategy, contributing to a knowledge base within preexisting Positive Psychology frameworks exploring self-regulation and mindfulness. In the same breath, OT can gain benefit from Positive Psychology as it provides a landscape of knowledge covering psychological phenomena that could broaden the field's knowledge base.

Key words: Mindfulness; self-regulation; sensory-regulation; Middle-childhood; Positive Psychology; Occupational Therapy

Preface

This mini-dissertation is submitted in partial fulfilment of the requirements for the degree *Magister Artium in Positive Psychology* at the Potchefstroom Campus of the North-West University (NWU) and calculates 60 credits of the total of 180 credits for Curriculum code: G801P.

The mini-dissertation is submitted in article format as indicated in the 2017 General Academic Rules (A4.1.1.1.4 and A4.2.9) of the North-West University. APA6 guidelines were used to guide the referencing style, formation and technical editing of the mini-dissertation. The manuscript in Section 2 has been prepared according to the requirements of the selected journal to which it will be submitted. The candidate chose to write an article for submission to *The Journal of Occupational Therapy* as the research topic accords with its aim and scope. *The Occupational Therapy* publishes original articles on research that may be applied to occupational therapy, clinical, educational, experimental, or methodological studies. Although the manuscript in section 2 has been prepared according to the requirements of the specific journal to which it will be submitted, some exceptions are made for purposes of the mini-dissertation and ease of the reading thereof. This includes in particular the length of the manuscript. For the purposes of the mini-dissertation, the page numbering of the mini-dissertation as a whole is consecutive. However, for the journal submission purposes, the manuscript will be numbered starting from page 1. In addition, the manuscript will be shortened before submitting it to the selected journal.

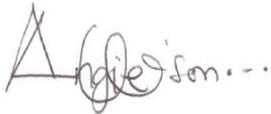
The mini-dissertation is presented in four sections: Section 1 includes the developed research proposal and the ethics application; Section 2 consists of the research article (in article format for examination); Section 3 gives a brief summary, and reflection on the research process – including recommendations for future research, and general conclusions; and, Section four includes all the addenda used in this research.

Letter of Permission

The co-authors hereby give permission to the first author to submit this article for purposes of a dissertation in partial fulfilment of the requirements for the degree *Magister Artium in Positive Psychology*. The first author contributed to theme development, did the major part of the literature review, qualitative analyses and interpretation of the data. She drafted the manuscript and incorporated suggestions and guidelines from the co-authors into the manuscript.



Dr. I. van Schalkwyk (Supervisor – Second author)



Dr.A. W Fadji (Co-supervisor – Third author)

Declaration by language practitioner

I declare that I, Jennifer Stacey, have edited the Masters Dissertation by Cailyn Sonderup (student number: 2672312) titled: Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. The edit was a general language edit that included grammatical accuracy, punctuation, spelling and clarity and fluency of expression.

Jennifer Stacey obtained the following degrees: BA (Wits) 1965, BA Hons, English Literature (Natal) 1970, BA Hons, Applied Linguistics (Wits) 1981, MA Language and Literature (by dissertation, Wits) 2000, PhD, Language and Literature (Wits) 2002. She also obtained a University Education Diploma (Natal) 1969. She has taught for nineteen years in the English Department at the University of the Witwatersrand where she lectured and was responsible for the supervision of post-graduate students, She is the co-author of *Read Well* and *Write Well*. Since retiring she has done freelance editing for Wits University Press, Jacana and Macmillan as well as academic editing of theses and journal articles.



11th November 2017

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Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

Section 1

1.1 Background and Orientation

This mini-dissertation was conducted in article format as indicated in the General Academic Rules of the NWU (2017). Section 1 covers the first preparative phase of the research process leading up to the manuscript which is the main research report to be presented in Section 2. An in-depth literature exploration was conducted in preparation of a research proposal that had to be approved by study leaders, subject group, research panel of AUTHeR, and the Health Research Ethics Committee (HREC) of the NWU. The documents approved by the above units are included in this chapter with some minor technical editing as a report of the first phase of the research conducted. The addenda required as part of the HREC application are not included in this chapter.

In view of the above some overlaps between Section 1 and Section 2 can be expected as far as literature review and methods are concerned.

1.2 Approved Protocol for this Study



Cover Page for Research Proposal	
School	Africa Unit for Transdisciplinary Health Research
Discipline	Positive Psychology
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Degree	Master of Arts Degree in Positive Psychology
Date of first registration for above mentioned degree	2015
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Title of thesis/dissertation/mini-dissertation	Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood
Study leader	Dr I. van Schalkwyk

Co-study leader	Dr A. W. Fadiji		
Number of times of submission of this protocol (Mark were applicable)	1 st	x	
	2 nd		
	3 rd		
Does this project fall under a greater umbrella project?			Yes
			No
			x
If yes , Ethical number of the umbrella project			
Title of the umbrella project			
Leader of the umbrella project			
Specific aims of umbrella project whereby this study links			
Will new data be collected?			Yes
			No
Names of small group panel within the school/unit that approved this research protocol (before sent to AUTHeR)	1	Prof Marie Wissing	
	2	Dr. Lusilda Schutte	
	3	Dr. Shingai Chigeza	
	4	Mrs. Christelle Liversage	
	5	Ms Amanda Cromhout	

Research Proposal

Title: Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

Key words: Positive Psychology; mindfulness; self-regulation; occupational therapy; middle childhood.

Introduction

Emerging studies within Positive Psychology (PP) have shown that mindfulness can be an effective medium to promote self-regulation and well-being (Niemic, Rashid, & Spinella, 2012). It has been proposed by researchers that mindfulness can be cultivated as an internal self-regulatory resource to foster resilience, resourcefulness and well-being (Kabat-Zinn, 2013). Also, recent research is starting to investigate the compatibility of positive emotions, flow, mindfulness and hope within the practices of Occupational Therapy (OT) (Nakamura & Csikszentmihalyi, 2014). However, little research to date investigates how mindfulness is used by occupational therapists (Reid, 2011). The focus of this research is to explore paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. Knowledge, in this study, refers to practical knowledge guiding occupational therapists' (OTs) use of mindfulness in the context of their sessions with children in middle childhood. In this sense knowledge entails actual knowledge about the needed subject matter, i.e. mindfulness, self-regulation and children in middle childhood, as well as an understanding of the common conceptions, misconceptions, and possible difficulties about these matters (Biggerstaff, 2011). A brief description and review of the literature on the key terms of the proposed study, namely mindfulness, self-regulation and middle childhood, are discussed below. Specific reference is made in these descriptions to how the terms are relevant in OT.

Mindfulness

Mindfulness refers to a way of training the mind to stay focused within the present here-and-now (Sedlmeier et al., 2012). According to Kabat-Zinn (2013, p. 25), mindfulness is defined as: “paying attention in a particular way: on purpose, in the present-moment, and non-judgmentally.” Niemiec, Rashid and Spinella (2012) argue that mindfulness could be best described as a non-conceptual, non-judgmental, moment-by-moment alertness. Associated terms may include awareness, lucidity of mind, and self-consciousness and insight (Siegel, 2006). Mindfulness training is very simple, but when practising it for the first time it can seem very difficult (Kabat-Zinn, 2013). Mindfulness training involves practising to focus one’s attention over and over again to return to the present moment. The intention is for the mind to steady, quieten and become more concentrated in order to maintain present-moment awareness for longer periods of time (Kabat-Zinn, 2013). Parallel to the training of attention is the cultivation of non-reactivity and non-judgment (Kabat-Zinn, 2013) by means of, for example, the use of systematic training techniques to help focus attention on the sensations of breathing (Zoogman, Goldberg, Hoyt & Miller, 2015).

Emerging research investigating the effects of mindfulness training suggests a myriad of beneficial effects on health and wellbeing (Verplanken & Fisher, 2014). These include: reduction in depression, anxiety, and chronic pain, improvements in optimism, resilience and emotional well-being as well as positive interpersonal relationships (Tang, Hölzel & Posner, 2015). Evidence from brain scans reveals that not only are there momentary neuronal changes but that the structures of the brain itself changes (Paulus, 2016).

Mindfulness is a tool that is becoming increasingly used for assisting children (Ostafin, Robinson & Meier, 2015), making it applicable to paediatric OT. Reid (2011) argues that OT interventions should go beyond remediation of impairments to embrace transcendence and enable meaningful participation. For meaningful engagement, cultivating “attention to intention”

and “presence in the present moment” is a prerequisite (Tatti, 2016). The relevance of mindfulness to promoting well-being and occupational engagement and performance within OT is therefore evident. For a tool to be justified as being within the scope of OT, an intervention should contain three basic elements: be client-centered; occupation focused and impact task performance (Tatti, 2016). Mindfulness fulfils all three criteria (Stew, 2011). Mindful techniques can be shaped to fit a client’s desires, needs and tolerance, making it client-centered (Stew, 2011).

Mindfulness could be adopted as part of everyday life and does not have to be limited to just one occupation or setting, making it possible to adapt and integrate it into daily activities (Stew, 2011). This is further supported by Reid (2009) who noted that mindfulness should not be reserved for the “perfect place and time” but rather practiced during real, everyday activities. According to OT philosophy, being able to express one’s creative capacity through meaningful, purposeful activities is what begets well-being (Reid, 2009). This makes mindfulness relatable as its power is in the practice - it demands a level of participatory action and intention (Niemiec et al., 2012). This art of cultivating a healthy mind-state adds another level of awareness to one’s engagement in activities, making it a critical component underlying the nature of occupational performance (Stew, 2011). One example of a mindful programme within schools is the “Mindfulness in Schools Project” (MiSP, 2017) which is based in the United Kingdom and aims to encourage the teaching of secular mindfulness in schools. Other mindfulness interventions include the Inward Bound Mindfulness Education (IBME) which is a non-profit organisation that aims at improving the lives of teachers, parents and adolescents, The Holistic Life Foundation based in Baltimore which has a mindfulness-based stress reduction programme developed by the well-known Dr. John Kabat- Zinn to help people address health problems, depression, anxiety and stress; The Garrison Institute focuses on the “Contemplative Teaching and Learning” initiative (CTL) that aims to improve student academic performance and promote healthy school environments (Wardle & Reinhardt, 2013).

Critical to this study is the reasoning that mindfulness training promotes self-regulation skills. This is important because self-regulation is an important developmental task in middle childhood (Newman & Newman, 2014). In the following paragraphs, self-regulation is discussed from psychological and occupational therapeutic viewpoints (Ostafin, Robinson & Meier, 2015).

Self-regulation

Self-regulation can be likened to a universal skill set that enables children to manage responses to daily happenings as well as important life events (Vanbergen & Laran, 2016). Self-regulation is the ability to monitor and manage energy states, emotions, thoughts, and behaviors (Martini, Cramm, Egan & Sikora, 2016). Like an executive committee “heading” up a company, it is the part of our nervous system that summons will-power; inhibits impulses and curbs maladaptive patterns. It is argued that self-regulation can be divided into three categories: the capacity to monitor, control and adjust behaviour (Vanbergen & Laran, 2016). Self-regulation is a multi-faceted skill set including self-awareness, emotional intelligence, efficient sensory processing, effective coping, interpersonal skills, and sustaining attention (Martini et al., 2016).

Psychological frameworks describe self-regulation as the ability to regulate between the cognitive “cool system”, and the emotional “hot system” (Muraven & Baumeister, 2000). Short et al. (2016) state that, mentally, it grants the capacity to plan, solve problems, strategize, make decisions, switch from one task to another, direct attention, resist distraction, control emotions, override inappropriate responses, persist in the face of failure and take flexible action. According to the Values-in-Action Institute (Peterson & Seligman, 2004), self-regulation is viewed as a virtue of “temperance”; and, it is regarded as a strength that prevents us from excess, allowing us to monitor and manage motivations, emotions and behaviour - with the absence of help (Sosik, Gentry, & Chun, 2012).

From an occupational therapist's standpoint, self-regulation is the capacity to make order of chaos and achieve homeostasis in all areas of life (Dunn, 2001). It is the capacity for flexible attentional deployment; balancing between behaviour inhibition and activation (Dunn, 2001). Self-regulation is thus dependent on two processes the intake of information from the environment and internal stimuli (making it a perceptual, emotional and cognitive process) and secondly, producing an adaptive response (Dunn, 2007). This adaptive response entails the flexibility to shift responses in challenging or unwanted situations. These viewpoints are compatible with the psychological definitions described above. However, the sensory-integration framework within OT specifically focuses on how our sensory profiles determine the way we react to our internal and external worlds. In other words, being aware of how we are wired - our automatic sensory preferences and aversions - helps us to become aware of triggers and maladaptive responses. When children are guided on how to better adapt and respond, they are able to self-regulate more effectively. Sawyer, Miller-Lewis, Searle, Sawyer and Lynch (2015) have found that the effective application of self-regulation has significant effects on learning and success in middle childhood. The ability to self-regulate through monitoring, evaluating and adjusting behaviour may not be a panacea that ensures overall success, but is certainly an important quality and skill to develop. Zimmerman (1996), over two decades ago, noted that training children in self-monitoring can be done in Middle School (eleven – fourteen years) as part of their regular curriculum leading to improvements in their use of these processes. These researchers regard self-regulation as contributing more to academic and long-term functioning than IQ. Given that research reveals the importance of self-regulation, there is a need for further information on how it can be cultivated in middle childhood. There is growing evidence on the efficacy of mindfulness-based interventions as a means to improving attention and self-regulatory capacities. Siegel (2006) suggests that mindfulness can be used as a means of “muscle strength training” towards the cultivating of self-regulation. In addition, mindfulness can be a helpful tool for children who have challenges

with self-regulation or difficulty managing emotions, or want to improve their concentration (Galla, Kaiser-Greenland & Black, 2016). It helps children become aware of and in tune with the present moment. When they are aware of the present, it will enable them to understand what is happening around them (Galla et al., 2016).

Middle childhood

Middle childhood comprises various exciting developmental indicators as well as possible serious challenges (Nieminen & Sajaniemi, 2016). This developmental phase (six–eleven years) brings many changes in a child’s life (Skinner & Zimmer-Gembeck, 2016). Psychosocially, according to Erikson (as cited in Charlesworth, Wood, & Viggiani, 2008), children in this life phase are entering the stage of industry versus inferiority, meaning that they develop the capacity to create and cooperate, which may lead to either incompetence or mastery. Mastery in middle childhood encompasses a wide range of competencies, such as, children should be able to dress themselves, tie their own shoe laces and catch balls easily with both hands (Skinner & Zimmer-Gembeck, 2016). Starting school brings children at this age into regular contact with the larger world, with friendships and increasing independence from parents and family becoming more important (Skinner & Zimmer-Gembeck, 2016). Emotional and social changes, such as wanting to be liked and accepted, paying more attention to friendships and teamwork, and cognitive changes, for example, understanding one’s place in the world and future-orientated thinking begin to emerge (Skinner & Zimmer-Gembeck, 2016). Through their social relationships, a sense of pride in their accomplishments and abilities begins to develop which is strengthened by the recognition from significant others, for example, when parents appreciate their children’s successful self-regulation in achieving goals (Charlesworth et al., 2008). Middle childhood sets the stage for school success, health literacy, self-regulation, the ability to make good decisions about risky situations, eating habits and the ability to negotiate conflict with family and friends (Wardle & Reinhardt, 2013).

Feinstein and Bynner (2004) noted that this age group is a developmental sweet spot. While physical growth and improvement in neuro-motor skills is important in middle childhood, social and emotional development is paramount during this life phase and a critical determinant of their psychological well-being (Bennett, Negley, Wells, & Connolly, 2016). Feldman (2007) states that middle childhood is a period for moving beyond the emotional bonds previously developed with the parents to emotional bonds with the peer group. In addition to the negative influences linked to these experiences, for example heightened anxiety, Kessler et al. (2010) indicate disintegrating families and social isolation as possible threats towards children's well-being. Also, in this day and age youngsters are spending more time with social media, and as a result may become victims of cyberbullying, for example, exclusion from WhatsApp groups (Goleman, 2013).

When we consider these developmental milestones within the complexity and the impact of globalization, poverty and the increasing rate of social and technological change (Western Cape Youth Development Strategy, 2013), healthy development may be compromised. Core precipitating risk factors specific to South Africa include disengaged parents, youth criminality and drug abuse (Western Cape Youth Development Strategy, 2013). Zaslavsky and Williams (2010) support this by indicating that disintegrating families and social isolation, living in a single-adult or child-headed home, and negative peer pressure are possible threats towards children's well-being. In a system which has many teaching posts unfilled and high rates of teacher absenteeism, teachers have limited time and energy to assist learners with not just academic outcomes but crucial soft skills that assist children to achieve their life potential. According to Lombard (2011) these added pressures could have serious implications for the well-being of children in middle childhood.

It is argued in this study that in order to address these pressures for children in middle childhood, we need to explore the active use of psychological strengths such as self-regulation. Sawyer et al. (2015) have found that the effective application of self-regulation has

significant effects on learning and success in middle childhood. The ability to self-regulate through monitoring, evaluating and adjusting behaviour is certainly an important skill to develop. The absence of self-regulation in middle childhood is associated with major social and personal problems (Muraven et al., 1999) caused when primal drives, impatience, impulsivity, distractibility and inability to delay gratification govern behaviour. Within occupational therapeutic frameworks, self-regulation is a promotive and preventative strength core to survival (Dunn, 2001). Positive Psychology studies show that self-regulation is considered as eudaimonic strength, critically important not only to survival, but also for psychological well-being and flourishing (Short, Mazmanian, Oinonen, & Mushquash, 2016).

Occupational therapy is an overlooked but effective means of addressing self-regulation (Wilcox, 2016). Occupational therapy views self-regulation as the ability to understand and manage emotions, sensory processing and integration as well as performing executive functional tasks such as organizing, planning, being flexible, or transitioning. Disruptive behaviour, distractibility, social challenges, academic struggles, low self-esteem and anxiety can all be additional life challenges when self-regulating difficulties are present. Parents seek support from OTs when they suspect that their children present with these challenges and do not meet developmental, cognitive, physical or socio-emotional milestones and are unable to function optimally on a day-to-day basis (in other words, when they consider their child's well-being as being threatened) (Dunn, 2001). It is increasingly suggested that the OTs' use of mindfulness as a self-regulation strategy can be an important tool to support children in middle childhood to acquire and implement competencies toward more effective coping and flourishing (Bennett et al., 2016).

There is little research exploring the knowledge and use of mindfulness as a strategy toward higher levels of self-regulation among OTs in South Africa, despite research showing the effectiveness of the use of mindfulness in various interventions or well-being programs (Cohn, Fredrickson, Brown, Mikels & Conway, 2009). The lack of research particularly in this

area may limit our understanding of how children are assisted in resolving the crises faced in middle childhood (Dujardin, Santens, Braet, De Raedt, Vos, Maes& Bosmans, 2016). Exploring OTs knowledge and use of mindfulness as self-regulatory “tools” to enhance the well-being and functioning of children in middle childhood will provide empirical data on current OT practices that can be adopted in future to improve other programs aimed at self-regulation strategies (Hardison& Roll, 2016). This study will contribute towards efforts to enhance scientific information to support programs aimed at self-regulation strategies developed and designed for the South African context used by paediatric OTs in the Western Cape (Peninsula).

In the light of the above-mentioned, the current study will explore occupational therapists’ knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood as well as how it is conceptualized within Positive Psychology that presently refers to self-regulation as a psychological strength.

Research question

The research question directing the study was formulated in the following manner: In what ways do paediatric occupational therapists use mindfulness as a self-regulation strategy for children in middle childhood?

Research aim and objectives

The aim of this study will be to explore paediatric OTs’ knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood.

The objectives of the research entail the following:

1. To explore and describe OTs’ knowledge and use of self-regulation with children in middle childhood.

2. To explore and describe OTs' knowledge and use of mindfulness as a self-regulation strategy.
3. To explore and describe how OTs apply mindfulness as a self-regulation strategy for children in middle childhood.

Method

Research design

A qualitative approach will be used for the purposes of this study because this paradigm is concerned with understanding the lived experiences and the subjective exploration of reality from the perspective of an insider as opposed to that of an outsider predominant in the quantitative paradigm (Creswell, 2014). A qualitative descriptive design will be used, since the aim of the research study is to explore (i.e. understand and describe) the participants' knowledge and use of mindfulness as a self-regulation strategy applicable to middle childhood (Webb & Auriacombe, 2006).

Participants

Population.

The population is defined by Bless and Higson-Smith (2013) as the set of elements that the research focuses upon and to which the results obtained by testing the sample should be generalized. The population of this research will include all OTs in the Western Cape Peninsula area who have experience of working with children in middle childhood using mindfulness as a self-regulation strategy.

Participant selection/Sampling.

A purposive sample of specialized paediatric OTs working with middle childhood, focusing on children's occupational performance toward improved well-being and practicing in the Western Cape Province, specifically in and around the Cape Peninsula, will be

approached, since the research will be conducted in the Western Cape Peninsula. This area has been chosen as there is, within this province, a concentrated group of paediatric OTs who are keen to focus on mindfulness that can add depth and insight to the study (personal conversation: Dr. Lombard, 17 February 2017). Participants, namely OTs, will be recruited from different vocational settings: working within private and public domains as well as rural and urban settings. This selection will encourage a diversity of perspectives. The participants will be recruited based on willingness to participate in the study. A minimum of ten participants will take part in the research in order to ensure data saturation (Onwuegbuzie, Leech, & Collins, 2012). According to Laher and Botha (2012) data saturation implies that the process of data collection should be continued until no new data emerge. Worley and Thomas (2014) state that the sample size determines data saturation when new interviews do not reveal any new findings but rather repeat what has been found in prior interviews. For example, Wood and Webb (2008) conducted interviews with ten participants before saturation point was reached in terms of emerging themes. In order to ensure data saturation at least ten participants will be recruited.

The gatekeeper, i.e. Dr. Lombard, will be asked to send a first email, namely the advertisement, in order to recruit participants. Dr. Lombard's contacts will be used (possible participants complying with the inclusion criteria). Then those who respond will be emailed by the appointed mediator (Elinor Lerisa, an administrative Occupational Therapist who works for OTASA – Occupational Therapy Association of South Africa) to formally invite them via email and telephonic communication to take part in the planned research. These possible participants will be informed of the following: the purpose and scope of the study, informed consent, the questions that will be asked during the individual interview and how the results will be used (Richards, Helen, & Schwartz, 2002). Participants will be given a week to decide on whether to participate or not. If they choose to participate they will be asked to print, sign and email the consent form for the mediator, who will also sign the consent forms. This will be

done before the interviews. On the interview day the researcher will arrive with the form, sign it and ask a witness to sign as well. The researcher will organize times with the participant once the form has been signed by the mediator and participant. In other words, the form will be signed by the researcher and a witness on the day of the interview with the participant present. The participants will also have the opportunity, via skype, to ask questions of the researcher about the research or any aspect of the research process before they provide the written consent. Once they have signed the informed consent and sent it back to the mediator via email, the researcher will contact the participant directly to set up possible times to conduct the interview.

Participants' inclusion will be subject to the following criteria:

1. Education and Occupation: Registered Occupational Therapist with the Health Professions Council of South Africa (HPCSA)
3. Language or communication: Participants should understand and be able to communicate in English.
4. Skills Required: At least three years of experience working within paediatrics, specifically within the middle childhood age band (ages six-eleven years).
5. An interest in and basic knowledge of mindfulness and how it can potentially be used in therapy with children during middle childhood.
6. OTs, both male and female, who are working and residing in the Western province (Cape Peninsula)

Exclusion criteria

1. Paediatric OTs known to the researcher.

Data collection procedures

Once the study has been approved by the Scientific Committee of the Africa Unit for Transdisciplinary Health Research (AUTHeR) of the North-West University and permission has been obtained from the North-West University's Health Research Ethical Committee (HREC) to conduct the research, a "gate-keeper" of the OT population in the Western Cape Peninsula will be approached. The researcher will first consult with a leading childhood self-regulation expert within the Western Cape, i.e. Dr. Annemarie Lombard. Based in the Cape Peninsula, she is a qualified occupational therapist, trained in sensory integration and has extensive experience in working with paediatrics, both locally and internationally. She has also written books and presented several workshops pertaining to self-regulation and sensory integration within the Western Cape. Dr A. Lombard will act as a gatekeeper of the OTs working in the selected province as she has come into contact through her experience and workshops with many of the OTs in the area. The following aspects will be discussed with the gate-keeper: the researcher will inform her about the planned study, namely the focus of the research, and the research methodology. The gatekeeper will be able to advise on those paediatric OTs best suited to explore mindful self-regulation strategies to ensure that the informants are able to contribute relevantly and deeply to the questions explored. With the guidance of the gatekeeper a mediator will be appointed to assist with approaching potential participants. Potential participants will then be informed about the planned research via email with the advert attached by the appointed mediator. They will be given enough time to both consider their participation and to ask questions prior to the research (at least one week before data gathering). It will be made clear to participants that refusal to participate will not jeopardize them in any way and, if willing to participate, participants will be asked to fill in the informed consent document which will be handed to them at least one week before the interview (Stevens, 2013). The mediator will collect these completed documents, whereafter the

researcher will contact the participants to arrange for data collection (conducting the semi-structured interviews).

Research instrument. A demographical questionnaire will be used to obtain relevant biographic information about the participants (See addendum F). The purpose of this questionnaire will be to provide a profile of the participants and identify the nature of the participants in the study, because crucial aspects, for example, years of experience as a paediatric OT and work context and age, could be confirmed through the questionnaire. Also, information about, for example, race and gender are relevant to determine if perceptions of mindfulness differ across these demographics. The demographic questionnaire will also contribute to the trustworthiness of the study. Shenton (2004) indicates the importance of noting the restrictions in the type of people who contribute to the data, and the information obtained from the questionnaire will be valuable in this regard.

Individual interviews will be conducted as this is a practical approach towards data collection when the focus is on gathering information from the relevant qualified professionals (Greeff, 2011). This process will help deepen insights and provoke ideas surrounding mindfulness as a possible self-regulation strategy applicable to middle childhood.

Within the qualitative approach appropriate questions are based on the studied literature, and data can be collected, amongst other methods, via structured or semi-structured interviews (Braun & Clarke, 2014). For the current study the interview guide will consist of certain themes that need to be covered during the interview discussion (see interview schedule, addendum A). Three types of questions will be utilized: the main, probing and follow-up questions. The main questions will guide the conversation (see interview schedule) and when responses from participants lack sufficient detail, the researcher may ask a probing question (Greeff, 2011). Probing is a technique for asking in a non-directive and unbiased manner for a more complete answer to a question (Rubin & Babbie, 2011). The participants will be requested to explain or elaborate on their answers further if unclear or if a more detailed

answer is needed (see addendum A). In this way valuable information will be gained as to the subject matter, namely the OTs' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. Follow-up questions may also be asked to pursue the implications of answers to the main questions (Greeff, 2011).

The interviews will be recorded as recording allows for a more comprehensive and thorough analysis of the information, providing an accurate and permanent record of the session. A transcriber (the researcher) will transcribe the collected data verbatim. In other words, the qualitative data will be derived from narrative materials, i.e. the verbatim transcripts of the collected data.

The researcher is trained and competent to conduct semi-structured interviews. The interviews will be conducted systematically and recorded with the participants' permission in order to ensure reliability. Semi-structured interviews will be used where open-ended questions directed by the research question of this study will be explored with the individual OT. Interviews will last no longer than one hour and be conducted in settings most suitable for the participants. The interviews will be conducted at the participants' offices as this will be most convenient for them. It would be preferred that the setting be conducive to the interview in that there is adequate space and that noise levels and all distractions are kept to a minimum.

Data Analysis

A thematic analysis will be used and key themes will be identified to provide a sufficient understanding of the OTs' knowledge and use of the key constructs, namely mindfulness and self-regulation strategies applicable to middle childhood. Data will be analysed following the six steps described by Bruan and Clarke (2006; 2013). These are, immersion in data to become familiar with the breadth of the data, developing initial codes, searching for themes, reviewing themes, naming and defining themes, and then, finally, writing a report. The thematic analysis

will be conducted manually and not by a computer program. Briefly put, in this qualitative analysis thematic analysis will be conducted in an inductive, explorative way by identifying themes (cf. Braun & Clarke, 2013).

Trustworthiness

According to Shenton (2004), adhering to the ideals of transferability, confirmability and credibility are essential to ensuring the trustworthiness of any qualitative study. Trustworthiness will be ensured by paying attention to the conceptual coherence of collected data. Conceptual coherence refers to the congruence between the research question and the components of the qualitative data. Conceptual coherence will be ensured by first selecting participants that can provide data that will adequately address the research question of the study. Secondly, thorough analysis of the collected data will be ensured by re-reading data and revising codes and themes in an iterative interactional process to ensure that the findings are trustworthy. Thirdly, to ensure that the researcher's bias is limited, the researcher and a co-coder will independently analyse the data, and then discuss their findings until reaching consensus. The co-coder will be provided with a work protocol for data analysis. (The researcher and co-coder have training in qualitative analysis). The themes that will be generated from the qualitative data will be used to develop or compare theory in a manner true to the inductive nature of qualitative data analysis.

In their influential work on trustworthiness, Lincoln & Guba (1985) suggest that the presence of credibility, confirmability, transferability and dependability offers trustworthiness to qualitative research. These concepts will be discussed briefly.

Credibility. Credibility refers to the process whereby the researcher ensures that what the participants have discussed is accurately described (Schurink, Fouché, & De Vos, 2011). In the planned research credibility will be enhanced through using a well-established data collection method of recorded interviews and their respective transcripts to ensure that the

results of qualitative research are true as obtained from the participants' perspective (Farely, 2013).

Transferability. This is when the results of qualitative research can be transferred to another context or setting (Farely, 2013). The researcher will ensure transferability by describing the context, participants, and settings of the study in detail (Braun & Clarke, 2013). Then again, although the research findings of this qualitative study may explain the key concepts in other but similar settings, we cannot generalize these findings to all paediatric OTs working with children in middle childhood.

Dependability. Dependability refers to the description of research methods used in order for the study to be repeated (Schurink, Fouché & De Vos, 2011). This will be achieved by making sure that the research process is coherent, well developed and reviewed.

Confirmability. This is based on the assumption that the results can be confirmed by others (Farrelly, 2013). It is important to keep evidence of all the verification that validates the findings and the analysis in order to ensure confirmability (Schurink, Fouché & De Vos, 2011). The researcher will keep all recordings of collected data to ensure confirmability.

Ethical considerations

The research proposal will be presented for approval to the Health Research Ethical Committee of the North-West University. The prospective participants will be informed about the aim, nature, duration and objectives of the study, the participants' role and their required informed written consent. The participants' permission to make audio recordings will also be obtained which is noted in the consent form. Also, they will be informed that their participation is voluntary and they can withdraw from the study at any time for whatever reason (Strydom & Delport, 2011). Confidentiality and anonymity will be explained to each participant and care will be taken to maintain the confidentiality and anonymity of the participants during and after the study. This will be done in the following manner: participants will be given pseudonyms and no

identification of participants will be made by any outside party. For purposes of transcription, the transcriber will have access to the interview content, but not to the names of participants and the researcher will ensure that audio recordings are made omitting the names of participants. A confidentiality contract will also be signed with the co-coder. Once the researcher has completed the research dissertation and article(s), the raw data will be handed over to the NWU for safekeeping for a period of five years, whereafter it will be destroyed by shredding the data.

The present study will adhere to the ethical guidelines of the Ethics Committee of the North West University by paying attention to the above-mentioned issues.

Risk level and protection from harm. OTs participating in this study as a non-vulnerable group makes this a low risk research study. However, there is a possibility that the participants could experience some negative emotions as they reflect, think about and talk about their (negative) experiences with child-clients. The participants will be given the assurance that they will be protected from (intentional) emotional harm. For example, the researcher will guard against manipulating the participants, and steps will be taken to avoid coercion. This will be done, for example, by paying careful attention to the provision of information about the planned research, giving the details of the purpose of the planned study, the interview questions to be expected as well as information about the time and venue where the data collection will take place. The researcher will include an incident report describing a clear process to be followed if the researcher is faced with an incident. Apart from the clear guidelines given by HREC, and the support that is part of study-supervision, (study leader and co-study leader of this research), this plan is part of the monitoring provided by HREC. The monitoring of the research will be done strictly according to the steps outlined in the protocol and the progress will be monitored by the study leader, co-study leader, regular progress reports, and HREC monitoring. If needed, amendments will be done only after consulting with

the study leader and co-study leader. If any amendments are needed to the research proposal, it will be reported to the Ethics Committee immediately, and a request for the amendment will be sent to the Ethics Committee. The researcher will not continue with the research (collecting data from participants) until the amendment is approved by the Ethics Committee. Should any adverse incidents occur or intense negative emotions be experienced, the participant would be directed to an external counsellor at the cost of the researcher.

Possible benefits to the participants. There are no direct benefits for participants of this study, although participation might hold the following potential indirect benefits: participants will have an opportunity to contribute toward scientific knowledge, i.e. research about the OTs' use of mindfulness as a self-regulation strategy would imply worthy results for their professions, as well as for their clients (i.e. children in middle childhood) and for future interventions. Then again, potential risks when conducting qualitative research include subjectivity or bias and the participants feeling coerced to participate, limiting the reliability and meaningfulness of the data. To counteract this all participants will be unknown to the researcher. Secondly, the researcher, through journaling and supervision, will aim to limit possible subjectivity or bias in order to produce findings which are trustworthy.

The expected benefits are considered to outweigh the potential risks.

Competence of the researchers. This study will be carried out by researchers with adequate levels of expertise and supervision (Richards, Helen, & Schwartz, 2002). The study-leaders, and co-coder, (Prof. Sandra Marais, emeritus professor at the Medical Research Council) of this study are competent to guide the data analysis of the present study. The student-researcher has an honours degree in occupational therapy and is currently completing her Masters of Arts degree in Positive Psychology. She has four years' experience in the field of occupational therapy which can be seen as beneficial to this study. The researcher will also be supervised by the study leader (Positive Psychology), and co- study leader (Positive Psychology) who are knowledgeable and have vast experience in the field of research. The

study leader and co-study leader hold PhDs in their respective fields (see addendum B). Regular supervision will be held with the study leaders.

Remuneration for participation. Participants will receive no payment for participation, whilst participation will also not incur direct costs to them as the researcher will travel and meet with participants at their place of work (see section 4.1). The participants will be given a token of appreciation that costs between R30-R50 for example, a hand cream.

Confidentiality and anonymity. The participants' rights will be respected and ensured in the following manner: participants have the right to be informed about the research, the right to freely choose to participate in a study, and the right to withdraw at any time without penalty. Overseeing the potential consequences of revealing the participants' identities is important. Given that the Occupational Therapy community within Cape Town is relatively small, participants could be easily recognized therefore protection of the participants' identities needs to be considered as to future publication. Participants will be informed how results will be published. Regarding data capturing and issues of confidentiality, the data will only be used for the purposes as set out in this proposal, in accordance with ethical principles and no manipulation of or changes to the data will be made. All data will be saved on password secured computers to which only authorized researchers have access. Recordings, transcripts and any other data will be archived for six years after completion of the study so that it can be accessed for future research. Participants will be informed of this and given the right to withdraw consent for use of their data (Richards, Helen & Schwartz, 2002). The co-coder will be obliged to sign a confidentiality contract. Also, anonymity regarding the responses of the participants is to be maintained throughout the research. For example, their names will not be mentioned and pseudonyms will be used.

Dissemination of results. Feedback of the results, namely a summary of the main findings and concluding results of the study will be given to the participants. Once the research is completed, participants will be invited to a morning feedback session where they will be able

to meet and hear the results of the research, which will be presented by the researcher. The results of the research will be presented at conferences. One article will be published in a scientific journal locally. Initially, the South African Journal of Occupational Therapy will be considered for this article.

Data management plan. A data management plan will entail the following: The collected data and audio recordings will be stored on a USB disk (memory stick) that will be locked in a cupboard inside the locked office of the researcher, and the researcher's laptop will be locked away for security reasons when the researcher is not busy working on the research. Collected data will be stored in this manner for the entire research process. Transcripts and working documents along with original recordings will be safeguarded by storing them in a safe inside the locked office of the researcher and the electronic data will be password protected. Data will be stored for six years at the North-West University (Wellington office), and then it will be destroyed by an appointed person.

Format and publication

The results of this study will be presented in article format. The article format complies with the 2016 General Academic Rules - A4.1.1.1.4 and A4.4.2.9 - of the NWU, South Africa. The manuscript will be submitted to *South African Journal of Occupational Therapy*. The publication criteria of the research article will be adhered to, and these guidelines will be built into the proposal.

Budget and Funding

Item	Estimated cost
Language editing	R 12 000.00

Printing	R2 000.00
Copies	R1 500.00
Traveling to participants	R1000.00
Gifts of appreciation for participants	R600.00
Co-coder	R 1 500.00
Transcriber	R2 000.00
Total	R 20 600.00
ii) The student will be responsible for the budget.	

TIME TABLE			
TASK	DATE	ACTIVITY	COMMENTS
Literature	Ongoing	Reading	
Protocol	November 2016 February 2017	Submit – small group	
Protocol	February 2017	Submit – AUTHeR	
HREC application	March 2017	Submission to HREC	

Literature review	Ongoing (2016 – 2017)	Write up/ Reading
Data gathering	April - June 2017	Recruit participants and conduct interviews
Data analysis	July 2017	Thematic analysis
Writing the dissertation (Introductory chapter, 1 articles and Conclusion chapter)	Ongoing	Write up/Read/Synthesize
Language editing	October 2017	Submit – language editor
October 2017	Submitting thesis	Submit

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1.3 Approved HREC application



Faculty of Health Sciences Ethics Office for Research, Training and Support

APPLICATION FOR APPROVAL OF A SINGLE STUDY

Faculty of Health Sciences Ethics Office for Research, Training and Support

**NWU ETHICS APPLICATION FORM FOR HREC
Application for Ethics Approval for Health Research Studies with Human Participants
and Biological Samples of Human Origin**

(April 2016)

CONFIDENTIAL!

NB! This document contains confidential information that is intended exclusively for the applicant(s), the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences of the North-West University and the designated reviewers. Should this document or parts thereof come into your possession in error, you are requested to return it to the HREC without delay or destroy it. Unauthorised possession, reading, studying, copying or distribution of this material, or any other form of abuse, is illegal and punishable.

Instructions and recommended path for the completion of your application:

- a. The research proposal forms the base document that is evaluated in conjunction with this application form. This application form gives the researcher the opportunity to expand on specific ethical issues required for approval.
- b. All applicants complete § 1, 2, 3, 4, 5 and 7.
- c. Select and complete the research-specific sub-sections from § 6 as applicable to the specific requirements of your study (utilise the table of contents).
- d. Ensure that a proposal that has been approved by an appropriate Scientific/Research Proposal Committee is attached to the application form as well as proof of its approval according to the standardised template (see § 4.1).
- e. Also attach an executive summary of the study (see § 4.1.1).
- f. The applicants should ensure that a copy of the informed consent form for approval, that has been compiled according to the informed consent template and checklist supplied by the Faculty of Health Sciences Ethics Office for Research, Training and Support, is submitted with the ethics application form.

- g. Any questionnaires or interview schedules that will be used in the completion of the study have to be attached
- h. Any advertisements that will be used in the study have to be attached
- i. Attach any permission letters received from governing bodies.
- j. Attach any contracts with collaborators/sponsors.
- k. For applications of collaborative studies being conducted on more than one site, it is required that copies of the proposal and the informed consent forms from all centres involved in the study are included with the application.
- l. Attach a 2-page narrative CV for each of the researchers involved in the study.
- m. Liaise with the appropriate officials and colleagues mentioned in § 8, complete and sign a printed copy.
- n. Submit scanned copies of the signed pages.
- o. Include copies of proof of ethics training for all researchers involved in the study (not older than three years).
- p. Submit the completed Ethics Application Form (with all the required attachments) via e-mail to Ethics-HRECApPLY@nwu.ac.za.
- q. All required documentation (as previously outlined) should be attached separately to the aforementioned e-mail as indicated in point p.
- r. Applicants must please ensure that all required finalised documents as indicated above are included with the application. **No additional attachments or version correction(s) will be accepted.** If this does occur and the application was incomplete then it will have to be resubmitted with the application form and all the required attachments which could mean that the application may miss the deadline for the closing of the agenda for the HREC meeting.

NWU Ethics Number													
	N	W	U	-							-		-
Campus											Faculty		
Principle											Research		
/Study Leader											entity		
Study Title: <i>Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood</i>													

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SECTION 1: STUDY IDENTIFICATION

Provide the necessary descriptions below to identify this study application:

1.1 Full, descriptive title of the study

Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

1.2 Name of the Study Leader/Primary investigator **NB!** Not the student's name

Dr I van Schalkwyk

1.3 Name of the Student (if applicable)

Cailyn Sonderup

1.4 Student number

2672312

1.5 Research entity e.g AUTHeR

AUTHeR

1.6 Discipline e.g. Consumer sciences

Positive Psychology

1.7 Type of study

Type of study

Single study	X
Larger study	
Single study affiliated to another study	
Educational	
Other: Specify Type here	

1.8 In this study use is made of

Mark ALL options as "Yes" or "No" with X in the appropriate box – more than one option may be marked as "Yes".

Description		Yes	No
Human participants (subjects)	Qualitative	X	
	Quantitative	<input type="checkbox"/>	<input type="checkbox"/> X
	Mixed method	<input type="checkbox"/>	<input type="checkbox"/> X

	Other e.g. program evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Filed privileged information (e.g. medical files) or stored biological samples of human origin (e.g. samples collected for another study or medical diagnosis)		<input type="checkbox"/>	<input type="checkbox"/>

1.9 Envisaged commencement and completion date of the study

More information

Here you can indicate the expected commencement and ending dates of the study, which may be anything from a day to a few years. The full expected duration of the study must be filled in below. Even if the expected duration of the study is uncertain, you can still make an estimate here and report the progress with the annual report. Ensure that the commencement date is at least a few weeks after the date of the HREC meeting at which your application is to be reviewed. The HREC will only grant ethics approval for a one year period. If the study should take longer, a monitoring report requesting permission for continuation must be submitted to the HREC two months before the expiry of the study.

Commencement Date	Completion Date																																								
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2. SECTION 2: STUDY CLASSIFICATION

Complete every option of all the questions in this section. This section is used to classify your study and select suitable reviewers.

2.1 Name of the Ethics Committee handling the application

HREC

2.2 Date of first application

Fill in below the date of the first submission of this ethics application

2	0	1	7	-	0	4	-	1	9
c	c	y	y		m	m		d	d

2.3 Date of revised application (if applicable)

Fill in below the date of the submission of the revised ethics application

2	0			-			-		
c	c	y	y		m	m		d	d

2.4 Version number

Fill in the number of times this application has been submitted.

Version:	1			
----------	---	--	--	--

2.5 Estimated risk level

Please indicate the estimated risk level of the research by using the two risk level tables indicated for adult human participants or children/incapacitated adults.

Estimated risk level for adult human participants	
Minimal risk	X
Medium risk	
High risk	

Estimated risk level for children/incapacitated adults	
No more than minimal risk of harm (negligible risk)	X
Greater than minimal risk but provides the prospect of direct benefit for the child/incapacitated adult	
Greater than minimal risk with no prospect of direct benefit to the child/incapacitated adult, but a high probability of providing generalizable knowledge	

2.6 Context of the Study

Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”.

Description	Yes	No	
Scientific Research	Study falls within a research entity	X	
	Study falls outside a research entity		X
	Study includes postgraduate students (e.g. masters or doctorate)		X
	Study includes contract work		X
Education and training (e.g. undergraduate practicals)	For staff of the North-West University		X
	For students (undergraduate or postgraduate learners)		X
	For other learners (not associated with University)		X

2.7 This study encompasses aspects that require additional ethical explanation

Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”. If a specific option is marked please complete the corresponding section in Section 6.

Description	Yes	No
-------------	-----	----

Vulnerable participants		X
Infection, genetic modification and commercialisation of cell and tissue lines		X
Use of drugs / medicines		X
Use of drug delivery systems		X
Use of food, fluids or nutrients		X
Use of radio-active substances		X
Use of toxic substances or dangerous substances		X
Measuring instruments and questionnaires that need psychometric interpretation		X
Possible impact on the environment		X
Any other aspect of potentially ethically sensitive nature (specify below)		X

Other aspects (specify)

Type here

2.8 For this study the following persons will be included in the study team

Fill in the number concerned with ALL options. Ensure that the participant numbers in this table correspond with the individuals indicated in Section 3.1, 3.2 and 3.4.

More information

The **study leader** is generally viewed as the individual who takes the final responsibility for all aspects of the study e.g. study leader or principle investigator.

The **study supervisor** is generally the individual responsible for the day-to-day management of the study.

Description		Number	
		Local	Foreign
Only for research studies	Study Leader (e.g. study leader/principle investigator)	1	0
	Study supervisor (day to day manager)	1	0
	Co-workers (researchers of the North-West University)	1	0
	Co-workers (researchers outside the North-West University)	0	0
	Co-workers (postgraduate students of the North-West University)	0	0
	Assistants/field workers	0	0
Only for education and training (e.g. undergraduate practicals)	Educator	0	0
	Co-workers (lecturers of the North-West University)	0	0
	Co-workers (lecturers outside the North-West University)	0	0
	Students (undergraduate learners of the North-West University)	0	0
	Students (postgraduate learners of the North-	0	0

	West University)		
	Other learners (not associated with the North-West University)	0	0
	Assistants/field workers	0	0
Sponsors		0	0

Other members of the study team not mentioned above (specify)

none.

2.9 The following professional supervisory persons are involved in this study (may in no way be directly part of the research team)

More information

Supervisor indicates that the individual is an independent monitor involved during data gathering of the study and acts as an advocate for the participants/patients. (Fill in the number involved in ALL options.)

Researcher / Supervisor	Number	Researcher / Supervisor	Number
Supervisory Doctor	0	Supervisory Psychologist	0
Supervisory Nurse	0	Supervisory Pharmacist	0
Supervisory Psychiatrist	0	Supervisory Social worker	0

Other supervisory person (specify)

none.

I hereby declare that the above information in "Section 2: Study Classification" is complete and correct and that I did not withhold any information.

Yes	No
X	

Remember to save your document regularly as you complete it!

3. SECTION 3: DETAIL OF STUDY LEADER/PRINCIPAL INVESTIGATOR, COWORKERS AND SUPERVISORS

3.1 Details of Study Leader/Principle investig

More information

NB! Only NWU staff, or extraordinary professors in collaboration with staff of the North-West University, may register as Study Leaders/Principal Investigators. The Study Leader/Principal Investigator accepts final, overall responsibility for the total study.

Surname	Full Names	Title
Van Schalkwyk	Izanette	Dr

NWU Campus	Faculty	Research entity/School
Potchefstroom	Health Sciences	AUTHeR

Position	University No.	Professional Registration (body & category)
Senior Lecturer	20977026	-

Telephone			NWU-box or Postal Address
Work	Home	Cell	
021-8643593	021-9758450	0723677739	Sentrum for Kind-, Jeug-, en Familiestudies Posbus 1083 Wellington 7654

E-mail Address
Type here
[PLEASE ATTACH THE TWO-PAGE NARRATIVE CV OF THE STUDY LEADER]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:

- a researcher's qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years)

3.2 Details of Study Supervisor

Is the Study Leader also the study supervisor?
(Please mark with X in the appropriate box.)

More information

Where the Study Leader is not physically present or consistently available and where supervision of the research activities is necessary, a suitable researcher/lecturer may be designated as **study supervisor**. The study supervisor is part of the study team.

Yes	No
X	

If "Yes", this part can be left blank.

If "No" (i.e. if the Study Leader is not the Study Supervisor) give details below.

Surname	Full Names	Title
Type here	Type here	Type here

NWU Campus	Faculty	Research entity/School
Type here	Type here	Type here

Position	University no.	Professional Registration
----------	----------------	---------------------------

		(body & category)
Type here	Type here	Type here

Telephone			NWU-box or Postal Address
Work	Home	Cell	
Type here	Type here	Type here	Type here

E-mail Address
Type here

[PLEASE ATTACH THE TWO-PAGE NARRATIVE CV OF THE STUDY SUPERVISOR]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:

- a researcher's qualifications
- career path to date
- specific research experience applicable to the present study (e.g. methodology or skills required)
- supervisory experience
- publication list (for the past 4 years) (if applicable)

3.3 Professional Supervisors

This section is completed if applicable and mentioned in Section 2.9.

More information

Professional supervisor does not refer to the study leader or the study supervisor. In all cases where medical emergencies may possibly arise, the physical presence of a doctor and a registered nurse is required. For the drawing of blood samples (e.g. diet manipulation and similar studies) the presence of a registered nurse is sufficient.

3.3.1 Name and qualifications of all supervisory professional persons

Name	Qualifications	Professional Registration	Function

(Type one name per row, or type "Not applicable" if there is no supervisory person.)

[PLEASE ATTACH THE TWO-PAGE NARRATIVE CV OF THE PROFESSIONAL SUPERVISOR/S]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:

- a researcher's qualifications

- *career path to date*
- *specific research experience applicable to the present study (e.g. methodology or skills required)*
- *supervisory experience*
- *publication list (for the past 4 years) (if applicable)*

3.4 Other Members of the Study Team

Names, qualifications, professional registration and functions of all the other co-workers (researchers, postgraduate students in the case of a research study, or lecturers (in the case of training) and assistants/field workers who form part of the study team) should be indicated. The information given in this table should correspond with the number of team members given in Section 2.8 (Add extra rows to the table if required.)

Name	Qualifications	Professional Registration	Association and/or Function
Dr. Angelina Wilson	PhD Psychology		
Ms Cailyn Sonderup	Bachelor of Science: Occupational Therapy (Honours)		

Note: Type one name per row, or type “none” if there is no other team member.

[PLEASE ATTACH A TWO-PAGE NARRATIVE CV FOR ALL THE MENTIONED RESEARCH TEAM MEMBERS IN THIS SECTION]

More information

NB! A 2-page CV in a narrative format, giving a brief overview of:

- *a researcher’s qualifications*
- *career path to date*
- *specific research experience applicable to the present study (e.g. methodology or skills required)*
- *supervisory experience*
- *publication list (for the past 4 years)*

3.5 Conflict of Interests and Sponsors (if applicable)

- 3.5.1 Declare with full details any conflict of interests that any member of the study team or professional supervisor (see § 3.1, 3.2, 3.3 and 3.4) might have.

More information

Examples of conflict of interest: financial, non-financial: intellectual, bias, overly optimistic promises of potential benefits, role of the researcher/s, desire of professional advancement, desire to make a scientific breakthrough, relationship with participants.

Name of Researcher	Complete description of the conflict and how it will be managed
“Not applicable”	“Not applicable”

Note: Type one name per row, or type “Not applicable” if there is no member of the study team or professional supervisor with a conflict of interest.

- 3.5.2 Give full details of all sponsors of the study.

Name of Sponsor	Contact Details	Affiliation & Contribution	Nature & Extent
"Not applicable"	"Not applicable"	"Not applicable"	"Not applicable"

Note: Type one name per row, or type "Not applicable" if there are no sponsors. Add extra rows to the table if required.

3.5.3 Is any participant in the study directly or indirectly involved with one or more of the sponsors or the researchers? Give full details.

Name of Participant	Association with Sponsor/Researcher
"Not applicable"	"Not applicable"

Note: Type one name per row, or type "Not applicable" if there are no such participants. Add extra rows to the table, if required.

3.5.4 Does any member of the study team receive any form of remuneration or other benefits from the sponsor(s), either directly or indirectly? Give full details.

Name of Team Member	Details
"Not applicable"	"Not applicable"

Note: Type one name per row, or type "Not applicable" if there are no such team members. Add extra rows to the table if required.

3.6 Collaborations (if applicable)

Declare with full details all collaboration agreements, e.g. with researchers or lecturers from another institution, national or international, who will be working on a defined section of the study.

More information

Your local team may collaborate with a team from a different national institution in South Africa or internationally, and thereby incorporate and benefit from their expertise and/or facilities. Typically, in such cases, functions and responsibilities differ for certain parts of the study. These functions and responsibilities must be fully described.

Name of Collaborator	National/International (Indicate which)	Full Description of functions and responsibilities
"Not applicable"	"Not applicable"	"Not applicable"

Note: Type one name per row, or type "Not applicable" if there are no contractors. Add extra rows to table, if required.

3.7 Contractual Agreements (if applicable)

Declare with full details all contractual agreements (e.g. with team members, collaborators and sponsors) on the study. Please note: A copy of any contractual agreements must be submitted to the Health Research Ethics Committee, together with the submission of this application. Add extra rows to the table, if required.

More information

Sometimes there are contractual obligations with co-workers or organisations outside the University. These contractual obligations may e.g. place restrictions on certain aspects on the availability of raw data i.t.o. intellectual right of ownership. Particularly where foreign co-workers are involved, these contracts can get complex. Therefore you must indicate here what these contractual obligations encompass, whether the University approved and sanctioned it and declare and describe any other potential legal and ethical implications thereof.

Name of Contractor	Full Description of the agreement
"Not applicable"	"Not applicable"

Note: Type one name per row, or type "Not applicable" if there are no contractors. Add extra rows to the table, if required.

[PLEASE ATTACH ALL CONTRACTUAL AGREEMENTS]

3.8 Confidentiality

Note: Other people involved in the research that could pose a risk to confidentiality should sign confidentiality agreements e.g. transcribers and co-coder/s.

[PLEASE ATTACH ALL CONFIDENTIALITY AGREEMENTS (SEE CONFIDENTIALITY AGREEMENTS AS APPROVED BY THE LEGAL OFFICE OF THE NWU)]

3.9 Indemnity

Note: If people are involved in the research as part of the research team but are not as staff on the payroll of the university or by contract on the payroll of the university, they will not be covered by the insurance of the university and have to sign an indemnity form.

[PLEASE ATTACH ALL INDEMNITY FORMS (SEE INDEMNITY FORMS AS APPROVED BY THE LEGAL OFFICE)]

Remember to save your document regularly as you complete it!

4. SECTION 4: RESEARCH PROPOSAL AND SCIENTIFIC COMMITTEE APPROVAL

4.1 Executive summary and research proposal

4.1.1 Executive summary of the study

Provide an executive summary (maximum 150 words) of the study in the following format:

- brief problem statement (approx. 3 sentences)
- aims and objectives of the study
- study design and method

Emerging studies within Positive Psychology (PP) have shown that mindfulness can be an effective medium to promote self-regulation and well-being (Niemiec, Rashid, & Spinella, 2012). However, little research to date investigates how mindfulness is used by occupational therapists as a self-regulation strategy for children in middle childhood (Reid, 2011). A qualitative approach will be used for the planned study, and a qualitative descriptive design will be used, since the aim of the research study is to explore the participants' knowledge and use of mindfulness applicable to middle childhood. A purposive sample of 12 Occupational Therapists (OTs) specializing in the field of middle childhood and practicing in the Cape Peninsula, Western Cape Province will be used. Data will be collected via semi-structured interviews and thematic analysis will be used to identify key themes. These findings will contribute to a sufficient understanding of the OTs practical knowledge and use of mindfulness as to self-regulation strategies for children in middle childhood.

4.1.2 Proposal

Note: For each study a descriptive proposal has to be submitted and is used as the main document for evaluation. The proposal should reflect the ethics of the research throughout. Attach a proposal approved by the Scientific/Proposal Committee of your research entity.

[ATTACH THE RESEARCH PROPOSAL]

4.1.3 Scientific/Proposal Committee approval

This study should have been reviewed and approved by a Scientific/Proposal Committee.

More information

The proposal needs to be approved by a Scientific/Proposal Committee before it will be reviewed by the HREC. The HREC relies on the scientific expertise of this committee regarding the evaluation of the scientific merit and design of the study.

Yes	Details	
X	Name of formal Scientific/Proposal Committee:	AUTHeR
	Title, initials and surname of all of the members of Scientific/Proposal Committee present during the review.	Dr Nicole Classen, Dr Shinga Chigeza & Dr Elouse Botha
	Date of approval:	13 March 2017
No	Reason:	Type here

4.1.4 Letter confirming approval of protocol

The HREC has to have proof of confirmation of approval by the Scientific/Proposal Committee.

[ATTACH CONFIRMATION OF APPROVAL OF THE STUDY PROPOSAL BY THE SCIENTIFIC/PROPOSAL COMMITTEE ON THE MANDATED TEMPLATE.]

Remember to save your document regularly as you complete it!

5. SECTION 5: ADDITIONALLY REQUIRED INFORMATION ABOUT ETHICAL IMPLICATIONS OF THE RESEARCH NOT PROVIDED IN THE PROPOSAL

Note: The information contained in this section is *additional* to what is contained in the proposal.

5.1 What will be expected of participants during data gathering?

What will be expected of participants during data gathering e.g. a one hour interview, venepuncture, needle prick, etc.

More information

Highlight what participants will be expected to do and what will be done to them, and how long it will take? This includes aspects such as procedures, sample collections and methods of information gathering and what the probable associated experience of participants will be. Provide particular details on any step that might violate privacy e.g. having to undress. This section supports you in the completion of the section in the informed consent form entitled, "What will your responsibilities be?"

- Potential participants will be expected to engage in a semi-structured interview with the researcher which will take one hour.
- They will also have to fill out a demographic questionnaire (10 minutes) that will be used to obtain relevant biographic information about the participants (See addendum F in protocol).

5.2 Risks and precautions

Name and explain *all the possible risks* for *all procedures* that the participants might experience during the research. Use the template at the back of the approved risk level descriptor document to guide you into identifying all the possible types of risk as well as the probability and magnitude of harm. Ensure that you also include reference to various biological sampling techniques e.g. venepuncture, buccal swabs etc. By completing this section it will help you to answer the two sections on "Are there risks involved in your taking part in research?" and "What will happen in the unlikely event of some form of harm occurring as a direct result of your taking part in this research study?" in the informed consent form.

Risks (e.g. physical, psychological, social, legal, economic, dignitary and community)
Identify all the possible risks.

There is a possibility that the participants could experience some negative emotions as they reflect, think about and talk about their (negative) experiences with children clients.

Precautions (When describing these precautions be clear on how they will mitigate all the identified risks)

Participants will be given the assurance that they will be protected from emotional harm, for example, the researcher will guard against manipulating the participants, and steps will be taken to avoid coercion. This will be done, for example, by paying careful attention to the providing of information about the planned research, giving the details of

Work time compromised	<p>purpose of the planned study, interview questions to be expected as well as information about the time and venue where the data collection will take place.</p> <p>Should any adverse incidents occur or intense negative emotions be experienced, the participant would be directed to an external counsellor at the cost of the researcher.</p> <p>The researcher will include an incident report describing a clear process to be followed if the researcher is faced with an incident. Provisions will be made for any incidents or adverse events to be discussed with the study leader immediately for guidance in dealing with the issue(s). If needed, amendments will be done only after consulting with the study leader and co-study leader.</p> <p>The participants will be given the necessary information about the research to assist their planning; and the interviews will take place at their offices in order to be considerate as to their work time.</p>
-----------------------	---

5.3 Benefits for participants

Describe 1) the potential *direct* benefits that the study might hold for the *individual participants*; or 2) the *indirect* benefits that the study holds for the *society at large* or for *the researchers and the organisations/institutions* they are working for, through the knowledge gained. By completing this section it will help you to answer the section on “Will you benefit from taking part in this research” in the informed consent form.

Direct benefits for participants	Indirect benefits for society at large or for the researcher's/institution
None.	There are no direct benefits for participants of this study, although participation might hold the following potential indirect benefits, namely, participants will have an opportunity to contribute toward scientific knowledge, i.e. research about OTs' use of mindfulness as a self-regulation strategy would imply worthy results for their professions, as well as clients (i.e. children in middle childhood) as well as future interventions.

5.4 Risk/benefit ratio analysis

The overall benefits should, in general, *always outweigh the risks*, for a study to be

considered ethical. If this is not the case, there needs to be a *strong justification* for why research ethics approval should be given.

Benefit outweighs the risks	x		
Risks outweigh the benefit		Justify:	N/A

5.5 Facilities

Describe the place(s) and facilities in detail where the study will be implemented. This description is applicable to both institutions and the community. Also describe the availability of measures to handle emergencies in an applicable manner and how this will be executed.

- The interviews will be conducted at the participants' offices as it would be most convenient for them. It would be preferred that the setting be conducive to the interview in that there is adequate space and that noise levels and all distractions are kept to a minimum.

5.6 Legal authorisation

Describe in detail *which bodies* must grant legal authorisation for this study (e.g. Department of Health, Medicine Control Council, etc.). Mention *whether authorisation has already been obtained*, with reference to attached proof, or *how you will go about* getting authorisation before the study commences.

Conditional approval will be granted to obtain this authorisation but the study cannot commence before the HREC has received the final documents.

OTASA is the legal body that will be permission will be requested from.

[PLEASE UPLOAD ALL DOCUMENTS INDICATING LEGAL AUTHORISATION]

5.7 Goodwill permission /consent

Describe in detail *what interest group representatives* must give permission for this study (e.g. community leaders, church leaders, tribal chiefs or other). Also mention *whether permission has already been obtained*, with reference to attached proof, or *how you will go about getting* permission before the study commences.

Conditional approval will be granted until proof of goodwill permission has be granted but the study cannot commence before the HREC has received the final documents.

N/A

[PLEASE UPLOAD ALL LETTERS OF GOODWILL PERMISSION]

5.8 Criteria for participant selection and recruitment

Describe in full which inclusion and exclusion criteria will be used to select participants and justify each of your choices. If you include one of the following in your exclusion/inclusion criteria, the need for it in the research has to be justified i.e. *race or ethnic origin, person's health or sex life, a person's inherited characteristics or biometric information*. Ensure that your exclusion criteria are not merely the opposite of the inclusion criteria.

Inclusion criteria	Justification
1. Education and Occupation: Registered Occupational Therapist with the Health Professions Council of South Africa (HPCSA)	This ensures that the information is sound and based on participants' opinions and experience who have a certified qualification.
2. Language or communication: Participants should understand and be able to communicate in English.	The use of English is relevant to the participants, since this is the professional language used by the OTs. Hence, the reason that English will be used.
3. Skills Required: At least 3 years of experience working within paediatrics, specifically within the middle childhood age band (ages 6-11 years).	This ensures that information is relevant and can be specifically contextualised to the chosen population of interest (middle childhood).
4. OTs, both male and female, who are working and residing in the Western province (Cape Peninsula)	The researcher resides in the Western Cape (Cape Peninsula) making transport costs minimal.
Exclusion criteria	Justification
1. Paediatric OTs known to the researcher.	Eliminates potential subjectivity bias.

5.9 Participant recruitment

Recruitment of human participants must take place within a specified time frame/schedule (i.e. specified starting and ending date) and cannot continue indefinitely. Explain how you will go about recruiting the participants.

More information

This process should take place in such a way that the participants do not feel intimidated by the process or implicitly "bribed", but decide absolutely voluntarily to participate. It should be fair and equitable. Include aspects of community entry e.g. advertisements, community advisory boards and the use of gatekeepers and mediators etc.

The process of obtaining the sample will involve particular steps, such as, once permission is obtained from the North-West University's research ethical committee, The researcher will first consult with a leading childhood self-regulation expert within the Western Cape, i.e. Dr Annemarie Lombard.

- Dr A. Lombard will act as a gatekeeper of the OTs working in the Cape Peninsula, Western Cape.
- The gatekeeper will be able to advise on paediatric OTs to be best suited to explore mindful self-regulation strategies to ensure that the informants are able to contribute relevant and deeply to the questions explored.
- A minimum of 10 participants will be recruited. This will be done via the mediator appointed by the gatekeeper - either by email or telephonically. Potential participants will have one week to decide whether or not to participate. It will be made clear that they are under no obligation with no consequences to them should they not wish to participate.
- The gatekeeper, i.e. Dr. Lombard will be asked to send a first email, namely,

the advertisement in order to recruit participants. Dr. Lombard's contacts will be used (possible participants complying with the inclusion criteria).

- Then those who respond will be emailed informed consent forms by the appointed mediator.

5.10 Informed consent (consent, permission, assent and dissent)

The focus in this section is on a detailed informed consent *process description*. According to law all participants must be fully informed about the implications and risks associated with participation in the study.

More information

How will you go about contacting them and explaining the study and accompanying implications to all participants? Ensure that participants are aware that participation in the research is voluntary and that they may withdraw from the study at any time. Where research is not carried out in participants' mother tongue, explain how you will go about conveying the information in an understandable manner. Where participants are not literate, a witness should be involved in obtaining informed consent. Be clear on who will obtain the informed consent (independent person) and how the researcher will be included to explain the research and answer questions. Discuss the role of the independent person. For your convenience you can use the template for informed consent as well as the accompanying checklist. Be clear on your description of the use of consent, permission, assent and dissent. For minors ensure that parental permission and child assent or adolescent consent (where applicable) is obtained for all participants.

- Possible participants within the Western Cape Peninsula (OTs recruited via Dr. Lombard's contacts and complying with the inclusion criteria) who responded to the advertisement, will be contacted by the appointed mediator and they will be informed of the following: the purpose and scope of the study, informed consent, questions which will be asked during the individual interview and how the results will be used (Richards, Helen, & Schwartz, 2002).
- If needed, the participants will also have the opportunity to ask questions via skype with the researcher about the research or any aspect of the research process before they provide the written consent.
- Participants will be given a week to decide on whether to partake or not. If they chose to partake they will be asked to sign and email the consent form for the mediator to sign. On the day of the interview, the form will be signed by the researcher and a witness in the presence of the participant.
- Once they have signed the informed consent and sent it back to the mediator via email, the researcher will then contact the participants directly to set up possible times to conduct the interview.
- It will be made clear to participants that refusal to participate will not jeopardize them in any way; and, if willing to participate.
- The mediator will obtain the informed consent and on the day of the study (data-collection) the researcher will again explain the research and answer all possible questions.
- Contact details of the researcher and HREC's office will also be provided to participants.

[INFORMED CONSENT FORM FOR APPROVAL AND THE INFORMED CONSENT CHECKLIST = **Attached**]

5.11 Incentives and/or remuneration of participants

Is any form of incentive and/or reimbursement offered to the participants?

If “Yes”, describe it in full in terms of *what, how, where, when, how much, terms and conditions*, etc. Remember to work according to the TIE principle (time, inconvenience, expenses e.g. transport and meals).

If no remuneration is offered, *justify why this is not the case* (Please mark with X in the relevant block and provide details).

Yes	No	Description
X		The participants will be given a token of appreciation that costs about R50, for example, a hand cream. Participants will not have to travel at their own expense as the researcher will drive to a place that most suits them (such as their work-place/office). They will be forewarned that time (approximately 1 hour) will be needed to conduct the interview. It is thus their choice, knowing that time sacrifice will not be compensated for on a monetary basis, to participate in the research or not.

5.12 Announcement of study results to participants

Indicate *what, how, when and to whom* you will communicate the results of the study to the participants.

What?	A summary of the findings will be sent to them via email, containing the written discussion and results drawn from the thematic data analysis extracted from the interviews.
How?	They will receive a message via e-mail announcing the study has been completed and submitted and that they will receive the findings in due course.
When?	The thesis will be submitted in November 2017. Therefore by end of 2017, they should receive the results from the qualitative study end of November.
To whom?	The researcher shall send out the results via email, once again thanking them for their participation.

5.13 Privacy and Confidentiality

Explain how you will ensure both privacy and confidentiality throughout the research.

Privacy

Privacy is concerned with who has access to *personal information and records* about the participant as well as *privacy during physical measurements* e.g. anthropometric measures or *psychological procedures* e.g. interviews/focus groups. Explain how privacy will be ensured in your study.

The researcher, study-leader, transcriber and co-coder will have access to the information and results. However, personal information will not be shared with anyone other than the researcher. Overseeing the potential consequences of revealing participants' identities is important. Protection of participants' identities applying to publications needs to be considered. Participants will be informed how results will be published. Participants will be informed of this and given the right to withdraw consent for use of their data. Also, anonymity regarding the responses of the participants is to be maintained throughout the research.

Names will not be mentioned and pseudonyms will be used. The Participant's' rights and privacy will be respected and insured in the following manner: participants have the right to be informed about the research, the right to freely chose to participate in a study, and the right to withdraw at any time without penalty.

Confidentiality

Confidentiality ensures that *appropriate measures* will be implemented to *prevent disclosure of information* that might identify the participant either during the course of the research or afterwards e.g. anonymising data or pooling results. Explain how confidentiality will be ensured in your study.

Regarding data capturing and issues of confidentiality, the data will only be used for the purposes as set out in this proposal, in accordance with ethical principles and no manipulation of or changes to the data will be made. All data will be saved on password secured computers to which only authorized researchers have access to. Recordings, transcripts and any other data will be archived for 6 years after completion of the study so that it can be accessed for future research. Transcribers and co-coder will be obliged to sign a confidentiality contract.

5.14 Management, storage and destruction of data/biological samples

Describe how you will manage the collected data/biological samples as well as the storage thereof.

Data/biological samples management

For management of data/biological samples, indicate:

- what data/biological samples will be stored
- how it will be stored
- how data in its various forms will be managed e.g. questionnaires, recorded interviews or biological samples
- who will manage the data/biological samples storage
- who will have access to the stored data/biological samples
- how will data be regained from other research team members
- and if data sharing is to occur, how will this be managed?

Ensure that you refer to both *electronic* and *hard copy versions* of data as well as *biological samples*.

A data management plan will entail the following: All data will be saved on password secured computers to which only authorized researchers have access to. The collected data, transcripts and other working documents as well as audio recordings will be stored on a USB disk (memory stick) that will be locked in a cupboard inside the locked office of the researcher, and the researcher's laptop will be locked away for security reasons when the researcher is not busy working on the research. Collected data will be stored in this manner for the entire research process. Also, information will also not be discussed with anyone that is not involved in the study.

Storage and destruction of data/biological samples

Describe:

- where and how data/biological samples will be stored
- for how long it will be stored

- who will be responsible for storage
- how it will be destroyed?

Ensure that you refer to both *electronic* and *hard copy versions* of data as well as *biological samples*

Transcripts and working documents along with original recordings will be safeguarded by storing them in a safe inside the locked office of the researcher and the electronic data will be password protected. Once the study is completed the data will be stored for 6 years at the North-West University (Wellington office), and then it will be destroyed by the appointed person.

5.15 Monitoring of research

Describe how you as the researcher will monitor:

- both the *implementation and progress* of the research
- compliance with the approved protocol
- the management of ethics throughout the research process
- the management of amendments during the execution of the research study, should they be needed
- how *incidents* and *adverse events/serious adverse events* (if applicable) will be reported.

The researcher, with the guidance of the study leader and co-study leader, will ensure that the process of research is followed according to the proposal and ethical requirements. This will be done by following the step-by-step process as discussed in the proposal's methodology section. In this way, the researcher intends to ensure compliance with the planned study, i.e. the research proposal.

The researcher will also have regular contact (via email, telephonic and if possible face to face consultation) with the study leader to discuss the research progress. The research proposal will be used as a reference point for the discussions, to ensure compliance with the research proposal.

The researcher will keep a reflective journal throughout the research process in which reflections and observations made during the research will be written. These reflections will be used to understand the research and critically review the researcher's understanding and experiences of the research process. Any ethical issues that may arise from the research could then be reflected and further discussed with the study leader.

The research will be critically reviewed by means of member checking, and various aspects of the collected data (e.g. data analysis) will be critically reviewed by a co-coder. These critical reviews will allow the researcher to gain further insights into the research and assist the monitoring and evaluating the research throughout the research process.

Provisions will be made for any incidents or adverse events to be discussed with the research supervisor immediately for guidance in dealing with the issues. If any amendments are needed to the research proposal, it will be reported to the Ethics Committee immediately, and a request for the amendment will be sent to the Ethics Committee. The researcher will not continue with the research (collecting data from participants) until the amendment is approved by the Ethics Committee.

5.16 Misleading of participants (if applicable)

Is use made of any form of misleading in the research, where the participants are not told the complete truth (e.g. placebo or psychotherapeutic interventions)?

More information

*In the case of using a placebo (e.g. drug or psychotherapeutic intervention), justification has to be provided that there is no alternative treatment with proven efficacy. When such an alternative treatment exists, the **standard of care** should be provided to both the experimental and control group.*

If “Yes”, in either case of using a placebo or during a psychotherapeutic intervention:

- justify in full why it is necessary
- describe how the participants will be protected against potential negative consequences of the placebo or misleading information/action.
- when you will disclose and debrief
- describe how you will disclose to them that they were misled.

Yes	No	Justification	Precautionary measures
	X	Type here	Type here
		Disclosure	
		When?	How?
		Type here	Type here

5.17 Use of previously collected data/biological samples (if applicable)

When your research study is making use of previously collected data or biological samples, provide a comprehensive description of the following.

What was the purpose of the original collection?

Type here

What will your purpose be?

Type here

Give a description of how research integrity was ensured in the original study by referring to:

- how informed consent was obtained from participants
- what they consented for
- the circumstances under which the data/biological samples were gathered
- how the ethics of data/biological sample collection was ensured?

Type here

Give a detailed description of:

- how data/biological sample storage was managed
- where and how data/biological samples were stored
- for how long it was stored
- who was responsible for storage
- how it was ensured that no tampering occurred?

Type here			
Foreseeable risks for participants or researchers involved in using the previously collected data/biological samples?			
Risks		Precautions	
Type here Participants:		Type here	
Researchers:			
Will re-consent be necessary?			
If "Yes" motivate:			
<ul style="list-style-type: none"> • why • for what • how this re-consent will be obtained. 			
Yes	No	Why?	Type here
<input type="checkbox"/>	<input type="checkbox"/>	For what?	Type here
		How?	Type here

[ATTACH A LETTER FROM THE STUDY LEADER/PI GIVING PERMISSION FOR THE USE OF THE DATA/BIOLOGICAL SAMPLES]

[ATTACH THE ETHICAL APPROVAL OF THE ORIGINAL STUDY]

[ATTACH THE INFORMED CONSENT DOCUMENTATION FOR RE-CONSENT (IF APPLICABLE)]

5.18 Use of filed privileged information (if applicable)

Filed privileged information may be used for research purposes with the research ethics committee *waiving informed consent*. Give a detailed description of the process under the following headings.

The nature of the information to be used:	
Type here	
Process of obtaining permission/ethical approval for access:	
Type here	
Process of data collection:	
Type here	
Process of anonymization of the data:	
Type here	
Foreseeable risks for participants whose filed privileged information is being accessed:	
Risks	Precautions
Type here	Type here

5.19 Justifiability of statistical procedures

5.19.1 Statistical consultation

Indicate how you ensured the suitability of the statistical procedures to be used in this study e.g. consultation or proof of expertise.

N/A

5.19.2 Justification of sample size

Indicate how the sample size was determined e.g. power calculation or previously reported study designs.

This study will be conducted in the Western Cape Province and will involve semi-structured interviews and a short demographic questionnaire with at least 10 participants in this study until data saturation is obtained.

5.19.3 Method of randomisation (if applicable)

If randomisation is to be used in this study, please indicate the manner by which randomisation will be assured.

N/A

5.19.4 Statistical methodology

Describe the means by which the statistical analyses will be conducted i.e. descriptive statistics, comparisons to be made, specific statistical tests to be used and the manner in which co-variance will be corrected for.

A thematic analysis will be used and key themes will be identified to provide a sufficient understanding of the OTs knowledge and use of the key constructs, namely mindfulness and self-regulation strategies applicable to middle childhood.

Remember to save your document regularly as you complete it!

6. SECTION 6: MATTERS THAT NECESSITATE ADDITIONAL INFORMATION

6.1 Sec 6a: Vulnerable participants

Please complete this section if your study includes *minors, adults with incapacities, persons in dependent relationships e.g. prisoners, students, persons with physical disabilities, collectivities and research-naïve communities*. (Mark ALL options as “Yes” or “No” with X in the appropriate box – more than one option may be “Yes”).

Description	Yes	No
Minors		X
Adults with incapacities		X
Persons in dependent relationships e.g. prisoners		X

Students		X
Persons with physical disabilities		X
Collectivities		X
Research-naïve communities		X
Other		X
Specify: Type here		

6.1.1 Description

Give a detailed description of the vulnerable group by referring to:

- who they are
- where they come from
- what makes them vulnerable.

“not applicable”

6.1.2 Justification for inclusion

Explain the necessity for including this specific group of vulnerable people as human participants (subjects) indicating the *direct benefit to the participants themselves* or the *indirect benefit of an improved scientific understanding*.

“not applicable”

6.1.3 Additional precautionary measures to reduce the risk of harm

Explain any additional precautionary measures you will take to reduce the possibility of harm.

“not applicable.”

Remember to save your document regularly as you complete it!

6.2 Sec 6b: Infection, genetic modification and commercialisation of cell and tissue lines

6.2.1 What will you be doing with the cell or tissue line?

Infection of the cell or tissue line	X
Genetic modification of the cell or tissue line	X
Commercialisation of the cell or tissue line	X

6.2.2 Number

How many cell and/or tissue lines will be used in the study?

Description	Number
Cell lines	0
Tissue lines	0

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.2.3 ACCORDING TO 6.2.2]

6.2.3 Product information

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the cell and tissue lines. Give the necessary details below.

More information

Human origin and consent:

For standard cell and/or tissue cultures from banks such as the ATCC consent already exists for general, ethically justifiable and medically related research.

Potential dangers and risks:

*Tissue banks such as the ATCC classify cell and/or tissue cultures as “bio safety level 1, 2 or 3”, depending on potential for infection with pathogens which may be harmful to man, or cancerous characteristics that would make growth in a person possible after undesirable, accidental inoculation. **NB!** These cell cultures may never be used in people.*

Cell Line or Tissue Line

Approved Name & Code	Description
Type here	Type here

Source / Origin / Supplier	Catalogue No.	Biosafety level?	
Type here	Type here	Level 1	<input type="checkbox"/>
		Level 2	<input type="checkbox"/>
		Level 3	<input type="checkbox"/>

Method of Storage and Maintenance

Type here

Potential Dangers	Precautionary measures
Type here	Type here

Other Relevant Information

Type here

6.2.4 What is the infectious agent to be used (if applicable)?

Type here

6.2.5 Has the participant given informed consent for commercialisation of their cell line?

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	If “Yes” attach a copy of the completed informed consent form
		If “No”, justify why not:

Type here

6.2.6 Has a benefit sharing agreement been undertaken with the participant if commercialisation of their cell line is being undertaken?

If "Yes" attach the agreement. If "No" justify why this is the case.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	If "Yes" attach a copy of the completed benefit sharing document
		If "No", justify why not:
		Type here

6.2.7 Expertise and facilities

Do you have the necessary expertise to work with the cell and/or tissue cultures? Provide full details. Mark "Yes" or "No" with X in the appropriate box. Provide additional details as requested.

Yes	Details	
<input type="checkbox"/>	Principal investigator Type here	Researchers/Students/Fieldworkers Type here
No	How do you plan to get the expertise required?	
<input type="checkbox"/>	Principal investigator Type here	Researchers/Students/Fieldworkers Type here

6.2.8 Facilities

Describe the facilities that are in place to work with the cell and/or tissue line.

Type here

6.2.9 Biosafety

Explain the measures you have in place to protect the safety of researchers/workers/the environment against the potential detrimental effects of the infection, genetic modification or commercialisation of the cell and/or tissue and waste. Also specify methods and safety measures for the disposal of cell and/or tissue cultures. If available, attach the standard operating procedures (SOPs) of these processes.

Type here

Remember to save your document regularly as you complete it!

6.3 Sec 6c: Use of Drugs/Medicines

Please complete this section if any drugs or medicines are used or administered in this study.

6.3.1 Number

How many types of drugs / medicines will be used in the study? If more than one dosage form or brand name of the same drug (active ingredient) is used, it must be counted and mentioned separately. Where applicable, placebos must also be mentioned and calculated.

Description of Drugs / medication	Dosage
Type here	Type here

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.3.2 ACCORDING TO 6.3.1]

6.3.2 Product information

Provide detailed product information as requested

Drug 1

Approved Pharmacological (Generic) Name	Brand Name(s) (if applicable)
Type here	Type here

Registered at the MCC-SA? ¹		If "Yes", MCC-SA Registration Number ²	If registered at the MCC-SA Error! Bookmark not defined. , is this for the indications, dosages and administrations as used in this study? Provide details where necessary.
Yes	No	Type here	Type here
<input type="checkbox"/>	<input type="checkbox"/>		

Accepted Dosage(s)	Accepted Administration Route(s)
Type here	Type here

Pharmacological Action, Therapeutic Effects & Indications	Side-effects, Precautions & Contra-indications
Type here	Type here

Other Relevant Information

Type here

Proof of preclinical approval of the product

Type here

6.3.3 Special authorisation for use in humans:

¹ MCC-SA = Medicine Control Council of South Africa.

² The MCC-SA registration number can be found on medicine product leaflets.

If any of the medication is not registered with the Medicine Control Council or, if it is registered but the study deals with indications for which it is not specifically registered, or if other doses, dosages, dosage forms or administration routes are used than what is registered, special approval must be obtained for the clinical test from the Medicine Control Council.

Has such special authorisation been obtained? Please mark with X in the appropriate box and complete further as applicable.

Yes	No	Authorisation Number	Date of Authorisation																				
<input type="checkbox"/>	<input type="checkbox"/>	Type no. here or type "Not applicable"	<table border="1"> <tr> <td>2</td><td>0</td><td></td><td></td><td>-</td><td></td><td></td><td>-</td><td></td><td></td> </tr> <tr> <td>c</td><td>c</td><td>y</td><td>y</td><td></td><td>m</td><td>m</td><td></td><td>d</td><td>d</td> </tr> </table>	2	0			-			-			c	c	y	y		m	m		d	d
2	0			-			-																
c	c	y	y		m	m		d	d														

If "Yes" please upload a copy of the approval letter. If "No" please explain the manner in which you plan to go about obtaining approval before the study begins.

NB! Final approval of the application by the HREC is dependent on the approval of the study by the Medicine Control Council. No study may continue before written approval is obtained.

If "No", type explanation here, or type "Not applicable"

[PLEASE UPLOAD MCC APPROVAL LETTER]

6.3.4 Explain the measures that will be in place to protect the workers, participants and the environment against the potential side-effects of the medicinal substances and waste (disposal).

Type here

Remember to save your document regularly as you complete it!

6.4 Sec 6d: Use of drug delivery systems

Please complete this section if any drug delivery systems are used or administered in this study.

6.4.1 Number

How many types of drug delivery systems will be used in the study? If more than one dosage form of a drug delivery system is used, it must be counted and mentioned separately.

Description of drug delivery system	Dosage
Type here	Type here

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.4.2 ACCORDING TO 6.4.1]

6.4.2 Drug delivery system information

Provide detailed drug delivery system information as requested. If more than one drug delivery system is used, it must be counted and mentioned separately.

Drug delivery system 1

Approved Name

Type here

Registered at the MCC-SA?		If "Yes", MCC-SA Registration Number	If registered at the MCC-SA, is this for the indications, dosages and administrations as used in this study? Provide details where necessary.
Yes	<input type="checkbox"/>	Type here	Type here
No	<input type="checkbox"/>		

Accepted Dosage(s)	Proof of Accepted Administration Route(s)
Type here	Type here

Side-effects	Contra-indications	Precautions
Type here	Type here	Type here

Other Relevant Information

Type here

6.4.3 Special authorisation for use in humans

If any of the drug delivery systems are not registered with the Medicine Control Council or, if it is registered but the study deals with indications for which it is not specifically registered, or if other doses, dosages, dosage forms or administration routes are used than what is registered, special approval must be obtained for the clinical test from the Medicine Control Council. Has such special authorisation been obtained? Please mark with X in the appropriate box and complete further as applicable.

Yes	No	Authorisation Number	Date of Authorisation																				
<input type="checkbox"/>	<input type="checkbox"/>	Type no. here or type "Not applicable"	<table border="1"> <tr> <td>2</td><td>0</td><td></td><td></td><td>-</td><td></td><td></td><td>-</td><td></td><td></td> </tr> <tr> <td>c</td><td>c</td><td>y</td><td>y</td><td></td><td>m</td><td>m</td><td></td><td>d</td><td>d</td> </tr> </table>	2	0			-			-			c	c	y	y		m	m		d	d
2	0			-			-																
c	c	y	y		m	m		d	d														

If "Yes" please upload a copy of the approval letter.

If "No" please explain the manner in which you plan to go about obtaining approval before the study begins.

NB! Final approval of the application by the HREC is dependent on the approval of the study by the Medicine Control Council. No study may continue before written approval is obtained.

If "No", type explanation here, or type "Not applicable"

[PLEASE UPLOAD MCC APPROVAL LETTER]

- 6.4.4 Explain the measures that will be in place to protect the workers, participants and the environment against the potential side-effects of the drug delivery system and waste (disposal).

Type here

Remember to save your document regularly as you complete it!

6.5 Sec 6e: Use of Food, Fluids or Nutrients

Please complete this section if any food, fluids or nutrients (alone or in combination) are used or administered in this study. This also applies to dangers with abuse, whether or not it holds any potential danger for people, animals or the environment.

Note: This does not include the provision of a regular plate of food for maintenance during residence.

6.5.1 Number

How many kinds of food, fluids or nutrients will be used in the study?

More information

If more than one dosage form or brand name of the food, fluids or nutrient is used, it must be counted and mentioned separately. Placebos are also included, except if the placebo treatment includes no administration.

Description	Number
Food	0
Fluids	0
Nutrients / nutrient combinations	0

[OPEN UP THE APPROPRIATE AMOUNT OF SPACES IN SECTION 6.5.2 ACCORDING TO 6.5.1]

6.5.2 Product information:

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the food, fluids and nutrients.

Food, Fluid or Nutrient

Approved Name	Normal Quantities and Uses	
Type here	Type here	
Potential Dangers with Abuse	Contra-indications	Precautions
Type here	Type here	Type here

Other Relevant Information & Literature References

Type here

- 6.5.3 Explain the measures that will be in place to protect the workers, participants and the environment against the potential detrimental effects of the food, fluids or nutrients and waste.

Type here

Remember to save your document regularly as you complete it!

6.6 Sec 6f: Use of Radio-Active Substances

6.6.1 Description:

Where any radio-active substances are used in experiments or administered to participants, give full details thereof, including the isotopes and possible risks it may hold for the participants/researchers/workers/environment.

Type here

6.6.2 Competence and licensing:

Do you have the necessary competence and licensing from the Department of Health at your disposal to work with radio-active substances? Mark "Yes" or "No" with X in the appropriate box. Provide the authorisation number if "Yes".

Yes	Details	
<input type="checkbox"/>	Study leader	Researchers/Students/ /Fieldworkers
	Type here	Type here
	Authorisation number	Type here
No	How do you plan to get the expertise required?	
<input type="checkbox"/>	Study leader	Students/Researchers/Fieldworkers
	Type here	Type here

Attach a copy of the approval certificate from the Radiation Control Officer.

[PLEASE UPLOAD THE APPROVAL LETTER FROM THE RADIATION CONTROL OFFICER]

6.6.3 Facilities

Describe the facilities and procedures to ensure safe use and disposal of the radio-active substances? Explain the measures you have in place to protect the safety of participants/researchers/workers/environment against the potential detrimental effects of the radio-active substances and waste. If applicable, also specify methods and safety measures for the disposal of radio-active contaminated body fluids and tissue.

Type here

Remember to save your document regularly as you complete it!

6.7 Sec 6g: Use of Toxic Substances or Dangerous Substances

Please complete this section if any toxic or dangerous substances are used or administered in this study. This also applies to dangers with abuse, whether or not it holds any potential danger for people, animals or the environment.

6.7.1 Number

How many toxic substances/dangerous substances will be used in the study?

Description	Number
Toxic substances	0
Other dangerous substances	0

6.7.2 Product information

Provide detailed product information, so that the reviewers can evaluate the ethically justifiable use of the toxic and dangerous substances.

NB! If more than one such substance is used, select and copy the whole table and paste as many tables underneath as is necessary.

Substance 1

Approved Name	Normal Uses & Dosages
Type here	Type here

Action & Toxic Effects/Dangers	Contra-indications	Precautions
Type here	Type here	Type here

Other Relevant Information

Type here

6.7.3 Explain the measures that will be in place to protect the workers, participants and the environment against the potential detrimental effects of the toxic or dangerous substances and waste

Possible detrimental effects	Precautions
Type here	Type here

Remember to save your document regularly as you complete it!

6.8 Sec 6h: Measuring instruments and questionnaires that need psychometric interpretation

Please complete this section if any measuring instruments or validated questionnaires are

used in this study that needs psychometric interpretation.

NB! Do not complete this section for any other types of questionnaires.

6.8.1 Name

Which psychometric measuring instruments and validated questionnaires will be used in the study?

Description

Type here

6.8.2 Information about the measuring instrument/questionnaire

Provide detailed information on the psychometric measuring instrument/questionnaire, so that the reviewers can evaluate the ethically justifiable use thereof.

NB! If more than one psychometric measuring instrument/questionnaire is used, select and copy the whole table and paste as many tables underneath as is necessary.

Psychometric measuring instrument/questionnaire

Approved Name

Normal Application

Type here

Type here

Reliability

Validity

Type here

Type here

Other Relevant Information

Type here

6.8.3 Validation for target group:

Is the measuring instrument validated for the target group (e.g. for South African circumstances)? Provide full details. Please mark with X in the appropriate box and provide details.

Yes	No	Details
<input type="checkbox"/>	<input type="checkbox"/>	Type here

Remember to save your document regularly as you complete it!

6.9 Sec 6i: Possible impact on the environment

Please complete this section if the study to be undertaken will have any impact on the environment as determined by evaluation of the study using the risk level descriptor for environmental impact. If this section is to be completed, please ensure that a completed copy of the risk level descriptor for environmental impact is attached to the application that is submitted.

6.9.1 Please indicate the risk level of the current study in terms of environmental impact.

Category	Description	Select
0	<p>None</p> <p>Effect on the environment: Potential for incidental and/or transient changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: No legal implications. No need to apply for any environmental authorisations; or</p> <p>Potential impact on reputation of the NWU: No discernible impact on reputation.</p>	
1	<p>Mild</p> <p>Effect on the environment: Potential for acceptable, short term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: Complaints for the public and/or regulator. No need to apply for any environmental authorisations; or</p> <p>Potential impact on reputation of the NWU: Potential impact on reputation.</p>	
2	<p>Medium</p> <p>Effect on the environment: Potential for acceptable, longer term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: Departmental enquiry and correspondence. Environmental authorisation may be required; or</p> <p>Potential impact on reputation of the NWU: Limited, reputation impacted with small number of people.</p>	
3	<p>Severe</p> <p>Effect on the environment: Potential for unacceptable, short term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: Notification of intent to issue a directive. Environmental authorisation required; or</p> <p>Potential impact on reputation of the NWU: Reputation impacted with some stakeholders.</p>	
4	<p>Very severe</p> <p>Effect on the environment: Potential for unacceptable, longer term changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: Withdrawal of permit. Environmental authorisation required; or</p> <p>Potential impact on reputation of the NWU: Reputation impacted with significant number of key stakeholders.</p>	
5	<p>Intolerable</p> <p>Effect on the environment: Potential for irreversible changes to valued flora and fauna, ecosystem processes and structure, including ecosystem services; or</p> <p>Legal implications: Referral to the National Prosecuting Authority. Potential investigation by authority with prosecution and fines. Environmental authorisation required; or</p> <p>Potential impact on reputation of the NWU: Reputation impacted with majority of key stakeholders.</p>	

6.9.2 Explain the type of environmental impact that the study will have.

Type here

6.9.3 Name and explain *all the possible risks* for the environment that may occur during the research. Use the template included in the approved risk level descriptor document for studies with environmental impact to guide you into identifying all the possible types of risk as well as the probability and magnitude of harm. Please also include *all the precautions* that will be taken in order to mitigate the risks to the environment.

Remember to save your document regularly as you complete it!

7. SECTION 7: OTHER ETHICS EVALUATIONS AND RISK INSURANCE

7.1 Sec 7a: Evaluation by other Research Ethics Committees

Please complete this section if this study has been or will be evaluated by any other research ethics committees, for example with multi-institutional studies. Provide information about all research ethics committees involved in the review and approval of this study.

Name of the Research Ethics Committee	Date of Approval/In Process	Contact Number or E-mail address of the research ethics committee	Approval no.
Type name here, or type "None"	Type details here	Type details here, or type "Not applicable"	Type details here, or type "Not applicable"
Type name here, or type "None"	Type details here	Type details here, or type "Not applicable"	Type details here, or type "Not applicable"
Type name here, or type "None"	Type details here	Type details here, or type "Not applicable"	Type details here, or type "Not applicable"

Remember to save your document regularly as you complete it!

7.2 Sec 7b: Risk Insurance

The North-West University has insurance at its disposal to cover the risk of claims against the University in case of damage to participants due to professional negligence – the maximum cover is currently R100 million per annum (all studies included). However, this is only available if studies are ethically approved and researchers have kept to the proposal.

7.2.1 Describe the potential risks to which the participants/researchers/assistants/field workers are going to be subject to in so far as complications may lead to summonses.

Type	Risks
------	-------

Participants	None
Researchers	Driving/ road accidents
Assistants and/or field workers	Driving/ road accidents
Others	None

7.2.2 These potential risks are covered by:

North-West University	<input checked="" type="checkbox"/>
Sponsor/s	<input type="checkbox"/>
Other: Specify: Type here	<input type="checkbox"/>

7.2.3 Is this insurance adequate (measured against the potential risks)?

Please mark with X in the appropriate box.

Yes	No	If "No", indicate what will be done to ensure that there is sufficient coverage?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Type here

Remember to save your document regularly as you complete it!

8. SECTION 8: DECLARATIONS

Applications and declaration are filled in and signed by:

Sec 8a: Study Leader

Sec 8b: Statistical Consultant

Sec 8c: Research Director

The pages with declarations and signatures must be **scanned** with this form.

[SCAN ALL SIGNED DECLARATIONS]

Health Research Ethics Application

Study Leader (Title, Initials and Surname)	Study Title (see § 1.1)
Type here	Type here

NWU Ethics Number

N	W	U	-							-			-		
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8.1 Sec 8a: Study Leader

Application and Declarations by Study Leader

I, the undersigned, hereby apply for approval of the research study as described in the preceding proposal and declare that:

- 8.1.1 The information in this application is, to the best of my knowledge, correct and that no ethical codes will be violated with the study;
- 8.1.2 I will make sure that the study is managed ethically justifiably from start to finish;
- 8.1.3 In the case of human participants;
- 8.1.3.1 I will put it clearly to all participants that participation (including assent) in any research study is absolutely voluntary and that no pressure, of whatever nature, will be placed on any potential participant to take part;
- 8.1.3.2 I will put it clearly to all participants that any participant may withdraw from the study at any time and may ask that his/her data no longer be used in the study, without stating reasons and without fear of any form of prejudice;
- 8.1.3.3 every participant who takes part in the study will receive the accompanying form for informed consent and it will be ensured that every participant understands the information (including the process and risks) fully;
- 8.1.3.4 every participant will sign the informed consent in writing before the study commences, or a witness will stand in on behalf of the participant when the participant is illiterate;
- 8.1.3.5 the written permission of the parent or legal guardians of all minor subjects will be obtained before the research commences;
- 8.1.3.6 any foreseeable risk is restricted to the minimum, any permanent damage is avoided as far as possible and that appropriate precautions and safety measures are in place;
- 8.1.3.7 confidentiality of all the information of all participants will be respected and ensured;
- 8.1.4 I and all co-workers/assistants/field workers are appropriately qualified, capable and legally competent to implement the proposed studies/procedures/interventions;
- 8.1.5 I will not deviate from the approved proposal and that I understand approval for the study will be cancelled if I deviate from the proposal without the approval of the Health Research Ethics Committee;
- 8.1.6 the study is scientifically justifiable;
- 8.1.7 where necessary, all contracts, permits and the applicable documents of relevance will be obtained before the research commences;
- 8.1.8 I will ensure that all data/biological samples are stored safely and remain in the possession of the North-West University;
- 8.1.9 I will report in writing any incidents or adverse events/serious adverse events that occur during the study without delay to the Health Research Ethics Committee;
- 8.1.10 I undertake to respect intellectual property rights throughout and to avoid any form of plagiarism;
- 8.1.11 I will obtain permission for amendments to the protocol and report annually (or more often for medium and high risk studies) to the Health Research Ethics Committee on the prescribed monitoring report concerning progress of the study;
- 8.1.12 I will notify the Health Research Ethics Committee should the study be terminated.

Name (Title, Full Names & Surname)	Qualifications
Dr Izanette van Schalkwyk	PhD Psychology



2	0	1	7	-	0	3	-	1	7
c	c	y	y		m	m		d	d

Signature

Date

Health Research Ethics Application

Study Leader
(Title, Initials & Surname)Study Title
(see § 1.1)

Type here

Type here

NWU Ethics Number

N	W	U	-							-			-		
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8.2 Sec 8b: Statistical Consultant (If applicable)

The statistician of the Statistical Consultation Service of the North-West University completes this section (where applicable).

8.2.1 Have you ascertained that the statistical analyses to be used in this study is justifiable according to your judgement?

Please mark with X in the appropriate box and provide details.

Yes	No	Remarks
<input type="checkbox"/>	<input type="checkbox"/>	Type here

Name (Title, Full Names & Surname)

Qualifications

Type here

Type here

2	0			-			-		
c	c	y	y		m	m		d	d

Signature

Date

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Faculty of Health Sciences
Health Sciences Ethics Office for Research,
Training and Support
Health Research Ethics Committee (HREC)

Tel: 018-285 2291
Email: Wayne.Towers@nwu.ac.za

12 July 2017

Dr I van Schalkwyk
CCYFS-COMPRES

Dear Dr Van Schalkwyk

APPROVAL OF YOUR APPLICATION BY THE HEALTH RESEARCH ETHICS COMMITTEE (HREC) OF THE FACULTY OF HEALTH SCIENCES

Ethics number: NWU-00038-17-S1

Kindly use the ethics reference number provided above in all correspondence or documents submitted to the Health Research Ethics Committee (HREC) secretariat.

Study title: Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

Study leader/supervisor: Dr I van Schalkwyk

Student: C Sonderup-26723212

Application type: Single study

Risk level: Minimal

You are kindly informed that your application was reviewed at the meeting held on 19/04/2017 of the HREC, Faculty of Health Sciences, and was approved on 12/07/2017.

The commencement date for this study is 12/07/2017 dependent on fulfilling the conditions indicated below. Continuation of the study is dependent on receipt of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation up to a maximum period of three years when extension will be facilitated during the monitoring process.

After ethical review:

Translation of the informed consent document to the languages applicable to the study participants should be submitted to the HREC, Faculty of Health Sciences (if applicable).

The HREC, Faculty of Health Sciences requires immediate reporting of any aspects that warrants a change of ethical approval. Any amendments, extensions or other modifications to the proposal or other associated documentation must be submitted to the HREC, Faculty of Health Sciences prior to implementing these changes. Any adverse/unexpected/unforeseen events or incidents must be reported on either an adverse event report form or incident report form at Ethics-HRECIncident-SAE@nwu.ac.za.

A monitoring report should be submitted within one year of approval of this study (or as otherwise stipulated) and before the year has expired, to ensure timely renewal of the study. A final report must be provided at completion of the study or the HREC, Faculty of Health Sciences must be notified if the study is temporarily suspended or terminated. The monitoring report template is obtainable from the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-Monitoring@nwu.ac.za. Annually a number of studies may be randomly selected for an external audit.

Please note that the HREC, Faculty of Health Sciences has the prerogative and authority to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process.

Please note that for any research at governmental or private institutions, permission must still be obtained from relevant authorities and provided to the HREC, Faculty of Health Sciences. Ethics approval is required BEFORE approval can be obtained from these authorities.

The HREC, Faculty of Health Sciences complies with the South African National Health Act 61 (2003), the Regulations on Research with Human Participants (2014), the Ethics in Health Research: Principles, Structures and Processes (2015), the Belmont Report and the Declaration of Helsinki (2013).

We wish you the best as you conduct your research. If you have any questions or need further assistance, please contact the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-HRECApPLY@nwu.ac.za.

Yours sincerely



Prof Wayne Towers
HREC Chairperson



Prof Minnie Greeff
Ethics Office Head

Current details: (13210572) C:\Users\13210572\Documents\HREC\HREC - Applications\2017 Applications\Applications 03-19 April 2017\NWU-00035-17-51() van Schalkwyk-C Sonderup\NWU-00035-17-51() van Schalkwyk-C Sonderup-AL\NWU-00035-17-51() van Schalkwyk-C Sonderup-AL.docx
12 July 2017

File reference: 9.1.5.3

1.3 Summary

This chapter shows that an acceptable research proposal had been developed by taking into account existing literature on the topic within the field of Positive Psychology as well as occupational therapy. General scientific requirements and ethical requirements have been considered in an appropriate manner in the planning of the research. When all the needed/required approvals have been obtained, the researcher proceeded with the research process, such as the recruitment of participants, collection of data and the data analysis. The research report on exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. These results are presented in the next section as a manuscript in article format.

SECTION 2

MANUSCRIPT FOR EXAMINATION

Manuscript in Article Format

The article format complies with the 2017 General Academic Rules - A4.1.1.1.4 and A4.4.2.9 - of the North-West University (NWU), South Africa. The candidate chose to write an article for submission to the South African Journal of Occupational Therapy as the research topic accords with its aim and scope. The South African Journal of Occupational Therapy publishes original articles on research that contribute to the scientific knowledge of the profession (OT) and its outcomes with particular reference to service delivery in Africa. Original articles include reports on research that provide a platform for debate about issues relevant to OT in Africa which will also contribute to the development of the profession worldwide

The aim of this article, "Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood", is to contribute to the scope of the profession's knowledge regarding both self-regulation and mindfulness and the potential application of mindfulness as a self-regulation strategy by filling the gap in research, to date, that investigates how mindfulness is used by occupational therapists as a self-regulation strategy particularly for children in middle childhood.

Please note that for the mini-dissertation purposes the thirty-six pages of the manuscript is prepared and a table (summary of findings) is included in the main text and not at the end of the manuscript to ease interpretation.

Guidelines to Authors: The South African Journal of Occupational Therapy

The guidelines, format and style requirements of The South African Journal of Occupational Therapy have been complied with. The article will be submitted to this journal to be considered for publication.

Language:	English and any consistent punctuation and spelling styles may be used.
Font and format:	Arial, size 11
Article title:	Bold and capital letters for proper nouns
Abstract:	Add a heading to the abstract paragraph not exceeding 200 words in length.
Keywords:	No more than 10 key words
Section headings:	Section heading should be concise, bold and capitalized
Levels of section headings:	First level heading: Bold and Capital Letters for proper nouns. Second level heading: Bold italics and Capital Letters for proper nouns. Third level heading: Italics and Capital Letters for proper nouns. Fourth level heading: Italics at the beginning of a paragraph.
Tables and figures:	Should have the heading at the top of the table and labeled with Roman letters e.g. Table II. Articles may include up to eight tables, graphs or diagrams and should be numbered and clearly labelled with their place in the text indicated as a guide to the editor.
Number of words:	Not more than 7500 words (all-inclusive). A word count must be attached (word count 22633 – for examination purposes – see preface)
Manuscript Order:	Title page; abstract; keywords; main text; acknowledgements; references; appendices (as appropriate); table(s) with caption(s) on individual pages; listed figure caption(s).
Referencing	Each reference in the text must be indicated by a number. This number should be inserted in superscript without brackets. A reference list should be provided on a separate numbered page following the text. References must be cited in the order that they appear in the text and should adhere to the Vancouver system.

2.3 Manuscript

Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

Cailyn Sonderup^{a*}, Izanette van Schalkwyk^b, Angelina W. Fadji^{c, d}

Author affiliations

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Abstract

This research explored paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. Although recent studies have started investigating the compatibility of mindfulness with the practices of occupational therapy (OT), there is little research to date investigating how mindfulness is used by occupational therapists as a self-regulation strategy particularly for children in middle childhood.

A qualitative descriptive design was used. Ten participants within the Western Cape Province were purposively selected to participate in the study. Data were collected via semi-structured interviews and thematic data analysis was conducted.

Findings suggest that the ways in which OTs view and use mindfulness are largely governed by a sensory standpoint, using mindfulness in tandem with sensory regulation to promote self-regulation. In this sense OTs view mindfulness as a critical life skill, applicable to both clinical and non-clinical populations of children in middle childhood. Whilst their knowledge of mindfulness appears limited, all were confident that mindfulness is an inherent part of their therapeutic practices, and that they use it implicitly in their practice with children in middle-childhood.

It is recommended that future research explores how mindfulness can promote well-being in body, mind and relationships as an integrative process for children, adolescents and adults.

Key words: Self-regulation; Sensory-Regulation; Mindfulness; Middle-childhood; Occupational Therapy; Positive Psychology

Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

Introduction

Emerging studies within Positive Psychology (PP) have shown that mindfulness can be an effective medium to promote self-regulation and well-being.¹ Recent research is also starting to investigate the compatibility of positive emotions, flow, mindfulness and hope within the practices of Occupational Therapy (OT).² However, little research to date investigates how mindfulness is used by occupational therapists³ and more specifically how mindfulness can be used to promote self-regulation for children in middle childhood.

It has been proposed that mindfulness can be cultivated as an internal self-regulatory resource to foster resilience, resourcefulness and well-being.¹ The topic of mindfulness blends into the tapestry of Positive Psychology and its intention to investigate and promote ways to foster well-being within individuals and communities¹. PP also focuses on realistic ways to do this, overlapping with the mission of OT, which is to translate the abstract (mindfulness in this case) into concrete and applicable actions to foster well-being, so that peoples *doings* can enhance their *being*.² A founding philosophy of OT is captured in this quote: "through use of his hands, as energized by mind and will, man can influence the state of his health".^{3(p13)}

The Occupational Therapists' (OTs) use of mindfulness in the context of their sessions with children in middle childhood pre-supposes certain knowledge. In this study knowledge entails actual knowledge about the needed subject matter, i.e. mindfulness, self-regulation and children in middle childhood, as well as an understanding of the common conceptions, misconceptions, and possible difficulties about these matters.⁴ A brief description and review of the literature on the key terms of the proposed study, namely mindfulness, self-regulation and middle childhood, are discussed below. While these concepts are familiar in the theoretical framework of Positive Psychology, specific reference is made in these descriptions to how the terms are relevant in Occupational Therapy (OT).

Mindfulness

Mindfulness refers to a way of training the mind to stay focused within the present here-and-now.⁵ According to Kabat-Zinn,⁶ mindfulness is defined as: "paying attention in a particular way: on purpose, in the present-moment, and non-judgmentally".^{6(p25)} Niemiec, Rashid and Spinella⁷ argue that mindfulness could be best described as a moment-by-moment alertness.

The maintaining of present-moment awareness for longer amounts of time is central to mindfulness training. Kabat-Zinn⁶ refers to this attentive awareness as the intentional activity for the mind to steady, quiet down and become more concentrated.

Mindfulness has been found to have beneficial physiological and psychological effects.⁶ Mindfulness training involves practising to focus one's attention over and over again to return to the present moment. Zoogman, Goldberg, Hoyt and Miller⁸ mention, for example, the use of systematic training techniques to help focus attention on the sensations of breathing. Verplanken and Fisher⁹ indicated benefits as to psychological functioning, for example, improvements in optimism, resilience, emotional well-being as well as positive interpersonal relationships as reported by Tang, Hölzel and Posner.¹⁰ Evidence from brain scans reveals that not only are there momentary neuronal changes but that the structures of the brain itself changes.¹¹

Mindfulness is a tool that is increasingly being used for assisting children¹², making it applicable to paediatric OT. Reid¹³ argues that OT interventions should go beyond remediation of impairments to embrace transcendence and enable meaningful participation. For meaningful engagement, cultivating "attention to intention" and "presence in the present moment" is a prerequisite.¹⁴ The relevance of mindfulness in promoting well-being and occupational engagement and performance within OT is therefore noteworthy. Furthermore, mindfulness fulfills the three criteria¹⁵ which need to be justified for its use as a tool within the scope of an OT intervention, namely to be client-centered, occupation focused, and to impact task performance.¹⁴

There are a number of mindfulness programmes that have been adopted within schools in the West. One example of a mindfulness program within schools is the Mindfulness in Schools Project (MiSP)¹⁶ developed in the United Kingdom to encourage the teaching of secular mindfulness in schools. Other mindfulness interventions include that of Inward Bound Mindfulness Education (IBME), which is a non-profit organisation that aims at improving the lives of teachers, parents and adolescents and The Garrison Institute which focuses on the Contemplative Teaching and Learning Initiative (CTL) used in the United States that aims to improve student academic performance and promote healthy school environments.¹⁷

Critical to this study is the reasoning that mindfulness training promotes self-regulation skills. This is important because self-regulation is an important developmental task in middle childhood.¹⁸ The absence of self-regulation in middle childhood is associated with major social and personal problems¹⁹ when primal drives, impatience, impulsivity, distractibility and

inability to delay gratification govern behaviour. Within occupational therapeutic frameworks, self-regulation is a promotive and preventative strength core to survival.²⁰ Positive Psychology studies show that self-regulation is considered as eudaimonic strength, critically important not only to survival, but also for psychological well-being and flourishing.²¹ In the following paragraphs, self-regulation is discussed from psychological and occupational therapeutic viewpoints.¹²

Self-regulation

Self-regulation can be likened to a universal skill set that enables children to manage responses to daily happenings as well as important life events.²² Self-regulation can be described as the ability to monitor and manage energy states, emotions, thoughts, and behaviours.²³ Like an executive committee “heading” up a company, it is the part of our nervous system that summons will power; inhibits impulses and curbs maladaptive patterns. It is argued that self-regulation can be divided into three categories: the capacity to monitor, control and adjust behaviour.²² Self-regulation is a multi-faceted skill set including self-awareness, emotional intelligence, efficient sensory processing, effective coping, interpersonal skills, and sustaining attention.²

Psychological frameworks describe self-regulation as the ability to regulate between the cognitive “cool system”, and the emotional “hot system”.²⁴ Mentally it grants the capacity to plan, solve problems, strategize, make decisions, switch from one task to another, direct attention, resist distraction, control emotions, override inappropriate responses, persist in the face of failure and take flexible action.²¹ According to the Values-in-Action Institute²⁵, self-regulation is viewed as a virtue of “temperance”; and it is regarded as a strength that prevents us from excess, allowing us to monitor and manage motivations, emotions and behaviour - with the absence of help.²⁶

From an occupational therapists’ standpoint, self-regulation is promotive to creating order in the midst of chaos and achieving homeostasis in all areas of life.²⁰ It is the capacity for flexible attentional deployment; balancing between behaviour inhibition and activation.²⁰ Self-regulation is thus dependent on two processes: the intake of information from the environment as well as internal stimuli (making it a perceptual, emotional and cognitive process) and secondly, producing an adaptive response.²⁷ This adaptive response entails the flexibility to shift responses in challenging or unwanted situations. These viewpoints are compatible with the psychological definitions described above. Within OT, the sensory-integration framework specifically focuses on how our sensory profiles determine the way we react to our internal and external worlds. In other words, being aware of how we are wired -

our automatic sensory preferences and aversions - helps us to become aware of “triggers” (external and internal) and maladaptive responses. When children are guided on how to better adapt and respond, they are able to self-regulate more effectively.

Sawyer, Miller-Lewis, Searle, Sawyer and Lynch²⁸ have found that the effective application of self-regulation has significant effects on learning and success in middle childhood. The ability to self-regulate through monitoring, evaluating and adjusting behaviour may not be a panacea that ensures overall success, but is certainly an important quality and skill to develop. Over two decades ago, it was noted that training children in self-monitoring could be done in Middle School as part of their regular curriculum leading to improvements in their use of these processes.²⁹ Given that research reveals the importance of self-regulation, there is a need for further information as to how it can be cultivated in middle childhood, specifically within the frameworks of OT and PP.

There is growing evidence on the efficacy of mindfulness-based interventions as a means to improving attention and self-regulatory capacities in middle childhood. Siegel³⁰ suggests that mindfulness can be used as a means of “muscle strength training”^{30(p10)} towards the cultivating of self-regulation. In addition, mindfulness can be a helpful tool for children who have challenges with self-regulation or difficulty in managing emotions, or want to improve their concentration.³¹ It helps children become aware of and in tune with the present moment enabling them to better understand what is happening around them.³¹

Middle Childhood and the use of Self-Regulation strategies in South Africa

Middle childhood comprises various exciting developmental indicators as well as possible serious challenges.³² This developmental phase (six - eleven years) brings many changes in a child’s life.³³ Psychosocially, according to Erikson³⁴, children in this life phase are entering the stage of industry versus inferiority, meaning that they develop the capacity to create and cooperate, which may lead to either incompetence or mastery. Mastery in middle childhood encompasses a wide range of competencies such as, children should be able to dress themselves and catch balls easily with both hands.³³ Starting school brings children at this age into regular contact with the larger world, with friendships and increasing independence from parents and family becoming more important.³³ Emotional and social changes, such as wanting to be liked and accepted, and cognitive changes, for example, understanding one’s place in the world and future-orientated thinking begin to emerge.³³ Through their social relationships, a sense of pride in their accomplishments and abilities begins to develop which are strengthened by the recognition from significant others, for example, when parents appreciate their children’s successful self-regulation in achieving goals.³⁴ Briefly put, middle

childhood sets the stage for school success, health literacy, self-regulation, the ability to make good decisions about risky situations, eating habits and the ability to negotiate conflict with family and friends.³²

When we consider these developmental milestones within the complexity and the impact of negative influences linked to, for example, globalization, poverty and the increasing rate of social and technological change,³⁵ healthy development may be compromised. Also, in this day and age youngsters are spending more time with social media, and as a result may become victims of cyber bullying, for example, exclusion from 'WhatsApp' groups.³⁶ Core precipitating risk factors specific to South Africa include disengaged parents, youth criminality and drug abuse.³⁵ Disintegrating families and social isolation, living in a single-adult or child-headed home, and negative peer pressure are possible threats towards children's well-being.³⁷ In a system which has many teaching posts unfilled and high rates of teacher absenteeism, teachers have limited time and energy to assist learners not just with academic outcomes, but with crucial soft skills that assist children to achieve their life potential. According to Lombard³⁸ these added pressures could have serious implications for the well-being of children in middle childhood.

Parents seek support from OTs when they suspect that their children experience challenges and do not meet developmental, cognitive, physical or socio-emotional milestones. In other words, their children do not function optimally on a day-to-day basis and they consider their child's well-being as being threatened.²⁰ Disruptive behaviour, distractibility, social challenges, academic struggles, low self-esteem and anxiety can all be additional life challenges when self-regulating difficulties are present. It is increasingly suggested that OTs' use of mindfulness as a self-regulation strategy can be an important tool to support children in middle childhood to acquire and implement competencies toward more effective coping and flourishing.³⁹

There is little research among OTs in South Africa exploring the knowledge and use of mindfulness as a strategy for increasing levels of self-regulation by OTs in South Africa, despite research showing the effectiveness of the use of mindfulness in various intervention or well-being programs.⁴⁰ The lack of research particularly in this area may limit our understanding of how children are assisted to resolve the crises faced in middle childhood.⁴¹ Exploring OTs knowledge and use of mindfulness as self-regulatory "tools" to enhance the well-being and functioning of children in middle childhood will provide empirical data on current OT practices that can be adopted in future to improve other programmes aimed at self-regulation strategies.⁴

Given the current research gap, we sought to explore paediatric occupational therapists' knowledge of mindfulness and in what ways they use mindfulness as a self-regulation strategy for children in middle childhood.

Aim

The aim of this study was to explore paediatric OTs' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood in the Cape Peninsula area (Western Cape Province) of South Africa.

Method

Research Design

A qualitative descriptive design was used to explore (i.e. understand and describe) the participants' knowledge and use of mindfulness as a self-regulation strategy applicable to middle childhood⁴².

Participants

Population

The population of this research includes all OTs in the Western Cape Peninsula area who have experience of working with children in middle childhood using mindfulness as a self-regulation strategy.

Participants' Profile Information

All the OTs are females, mostly white and most participants are above the age of 31 years. Sixty percent have children of their own. All have their Honors in Occupational Therapy and fifty percent have a master's degree. Whilst all currently work in private paediatrics, fifty percent have worked for more than ten years in this field. See Table I below.

Table I: Demographic profile of participants

1. Age	
18-30 years	2
31-40 years	4
40-50 years	1
50+ years	3

2. Race	
African	-
Coloured	2
Indian	-
White	8
3. Children / Dependents	
No children	4
Children/dependents	6
4. Qualifications	
PhD	1
Masters	5
Hons / Post grad diploma	4
B degree	-
5. Work context	
NGO	-
Private	10
Government	-
Other: Please specify	-
6. Years of experience as paediatric OT	
3 – 5 years	2
6 – 10 years	3
10 and more	5

Participant selection. A sample was purposively selected of specialized paediatric OTs working with children in middle childhood, focusing on their occupational performance toward improved well-being. Occupational therapists practicing in the Western Cape Province, specifically in and around the Cape Peninsula were approached by an independent person. This area was chosen because there is a concentrated group of paediatric OTs who are actually focusing on mindfulness, within this province, that can add depth and insight to the study (personal conversation: Dr. Lombard, 17 February 2017). Participants, namely OTs,

were recruited from private vocational settings. Participants were recruited based on their willingness to participate in the study. Ten participants were recruited to participate in the research in order to ensure data saturation.⁴³ From participant eight onwards it was realized that relatively little “new” info was presented, resulting in data saturation. Therefore only ten interviews were conducted to obtain rich data.

The participants' inclusion was subject to the following criteria:

1. Education and Occupation: Registered Occupational Therapist with the Health Professions Council of South Africa (HPCSA)
2. Language or communication: Participants should understand and be able to communicate in English
3. Skills Required: At least three years of experience working within paediatrics, specifically within the middle childhood age band (ages six-eleven years).
4. An interest in and basic knowledge of mindfulness and how it can potentially be used in therapy with children during middle childhood.
5. OTs, both male and female, who are working and residing in the Western province (Cape Peninsula)

Paediatric OTs known to the researcher were excluded from taking part in the study.

Data Collection Procedures

Once the study was approved by the Scientific Committee of the North-West University; permission was obtained from the North-West University's Health Research Ethical Committee (HREC) and goodwill permission was given by the Occupational Therapy Association of South Africa (OTASA) to conduct the research. The gatekeeper was approached, the purpose of the planned research was explained to her, and she sent the first email, namely the advertisement (see Addendum A), in order to recruit participants. Potential participants who responded to the gatekeeper's email and the advertisement were then emailed by the appointed mediator to formally invite them to take part in the planned research. These participants were informed of the following: the purpose and scope of the study, informed consent, questions which would be asked during the individual interview and how the results would be used. Participants were given a week to decide on whether to partake or not. Informed consent documents were signed in the presence of the mediator (addendum B). Then the researcher contacted the participants to arrange for data collection opportunities.

Research Instrument

A demographical questionnaire was used to obtain relevant biographic information about the participants (See addendum C). The questionnaire was useful to provide a profile of the participants, seeing that crucial aspects, for example, years of experience as paediatric OT and work context and age could be confirmed through the questionnaire.

Individual interviews were conducted since the focus of the study was to gather information from the relevant qualified professionals.⁴⁴ This process was used to deepen insights and ideas surrounding mindfulness as a possible self-regulation strategy tool applicable to middle childhood. Appropriate questions were based on studied literature, and data were collected via semi-structured interviews.⁴⁵ For the current study the interview guide consisted of certain themes that need to be covered during the interview discussion (refer to interview schedule, addendum B). Three types of questions were utilized: main, probing and follow-up questions. Probing was done in a non-directive and unbiased manner to obtain more complete answers to the questions.⁴⁶

With the permission of the participants, the interviews were recorded to provide an accurate record of the session and then later transcribed.

Data Analysis

A thematic analysis was used and key themes were identified to provide a sufficient understanding of the OTs' knowledge and use of the key constructs, namely mindfulness and self-regulation strategies applicable to middle childhood. Data were analyzed following the six steps described by Clarke and Braun.⁴⁵ These are, immersion in data to become familiar with the breadth of the data, developing initial codes, searching for themes, reviewing themes, naming and defining themes, and then finally writing a report.⁴⁷ The thematic analysis was conducted manually and not by a computer program.

The analysis was approached both deductively and inductively. The deductive reasoning allowed the research to answer the research question by using existing theory in relation to the key concepts of his research, namely self-regulation, mindfulness and children in middle childhood. Qualitative research allows for the inductive approach that involves the process of observation and pattern identification in order to answer the research question. Therefore, thematic analysis was used for the identification of themes via deductive reasoning and categories via inductive reasoning.

Trustworthiness

According to Shenton⁴⁸ adhering to the ideals of transferability, confirmability and credibility are essential to ensuring the trustworthiness of any qualitative study. Trustworthiness was ensured by paying attention to the conceptual coherence of collected data, indicating the congruence between the research question and the components of the qualitative data. Conceptual coherence was ensured by first selecting participants who could provide data that would adequately address the research question of the study. In addition, thorough analysis of the collected data was ensured by re-reading data and revising codes and themes in an iterative interactional process to ensure that the findings are trustworthy. Furthermore, to ensure that the researcher's bias was limited, the researcher and a co-coder independently analyzed the data, and then discussed their findings until reaching consensus. The themes that were generated from the qualitative data were used to develop or compare theory in a manner true to the inductive nature of qualitative data analysis.

Ensuring trustworthiness was also guided by paying attention to the presence of credibility, confirmability, transferability and the dependability of the data.⁴⁹ Credibility was enhanced through using a well-established data collection method to ensure that the results of the study are a true reflection of the participants' perspectives.⁴⁸ To guarantee credibility, the researcher recorded all individual interviews, listened to the recordings and transcribed the recordings herself. Transferability was ensured by describing the context, participants, and settings of the study in detail.⁴⁷ Dependability was ensured by making sure that the research process was coherent, well developed and reviewed.⁵⁰ Confirmability was ensured⁴⁸ by keeping evidence of the the analysis of data and verification of the findings.

Ethical Considerations

The research proposal was presented for approval to the Health Research Ethical Committee of the North-West University (ethics number: NWU-00038-17-S1). The prospective participants were informed about the aim, nature, duration and objectives of the study, the participants' role and their required informed written consent. Permission was also obtained to audio record the participants' responses. In addition, they were informed that their participation was voluntary and they could withdraw from the study at any time for whatever reason.⁵¹ Confidentiality and anonymity was explained to each participant and care was taken to maintain the confidentiality and anonymity of the participants during and after the study. This was done in the following manner: participants were given pseudonyms and no identification of participants was made by any outside party. For purposes of transcription, the transcriber had access to the interview content, but not to the names of participants and the researcher ensured that audio recordings were done omitting names of participants. A

confidentiality contract was also signed with the co-coder. Once the researcher has completed the research dissertation and article(s), the raw data will be handed over to the NWU for safekeeping for a period of five years, whereafter it will be destroyed by shredding the data. The present study adhered to the ethical guidelines of the Ethics Committee of the North West University by paying attention to the above-mentioned issues.

Risk Level and Protection from Harm

OTs participating in this study as a non-vulnerable group made this a low risk research study. However, there is a possibility that the participants could experience some negative emotions as they reflect, think about and talk about their (negative) experiences with child-clients. Participants were protected from harm by following the clear guidelines given by HREC, and the guidance of the study-leaders.

Confidentiality and Anonymity

The participants' rights were respected and ensured in the following manner: participants were informed about the research, the right to freely choose to participate in a study, and the right to withdraw at any time without penalty. Given that the Occupational therapy community within Cape Town is relatively small, participants could be easily recognized. The protection of the participants' identities when applying to publications needs to be considered. The participants were informed of how results would be published. Regarding data capturing and issues of confidentiality, the data were only used for the purposes as set out in the proposal, in accordance with ethical principles and no manipulation of or changes to the data were made. All data were saved on password secured computers to which only authorized researchers have access to. Recordings, transcripts and any other data will be archived for six years after completion of the study so that it can be accessed for future research. Participants were informed of this and were given the right to withdraw consent for use of their data.⁵²The co-coder was obliged to sign a confidentiality contract. Also, anonymity regarding the responses of the participants was maintained throughout the research. For example, their names were not mentioned and numbers were used.

Results and Discussion

The findings of this qualitative study are presented as three main themes (see Table II). Results are presented with a brief discussion of the themes expanding on i) congruent findings, ii) contradictory findings, and iii) new insights between the current study and existing literature. In order to show the credibility of the themes, each theme is accompanied with excerpts from the data. Thematic analysis allowed for themes via deductive reasoning and the identification of categories via inductive reasoning.

Table II: Summary of Themes and Sub-themes

Main Themes	Sub-themes
Theme 1: Self-regulation in the context of OT	1.1 <i>Self-regulation: A sensory process</i> 1.2 <i>Self-regulation: A Skill</i> 1.3 <i>Self-regulation: OT Strategies</i>
Theme 2: Mindfulness as part of the OT process	2.1 <i>OTs' perspectives of mindfulness</i> 2.2 <i>Mindfulness and the Brain</i> 2.3: <i>Mindfulness Strategies</i> 2.3.1 <i>Senses</i> 2.3.2 <i>Environment</i> 2.3.3 <i>Education</i>
Theme 3: OTs working with children in middle-childhood	<i>(no sub-theme)</i>

Theme One: Self-regulation in the Context of OT

1.1 Self-regulation: A Sensory Process

OTs explained self-regulation from within a sensory framework and they frequently cited influential theories of the arousal model and sensory processing. They refer to the following as what needs to be taken into consideration when it comes to self-regulation; i) to include the relationship between the child's nervous system and behaviour; ii) the environment; and, iii) the need for co-regulators (the important role of the child's social environment). The aim of self-regulation, within OT is, therefore, to achieve the optimal arousal/calm-alert state.

A common thread through the various interviews was the OTs' unique understanding of self-regulation from a sensory viewpoint.

It's [self-regulation] about getting a child into a space where they are able to make appropriate choices and appropriate behavior. Obviously in therapy we use a lot of sensory strategies. [P6]

When it comes to regulation....I use a sensory channel. [P1]

I think my first step [in relation to self-regulation] is to identify what the child's sensory profile is like. [P2]

OTs generally spoke of self-regulation by focusing on the physiological components of self-regulation i.e. the ability to shift between the sympathetic nervous system and parasympathetic nervous system. It was evident that OTs' understanding of self-regulation is rooted largely within sensory integration³ (neuro-developmental) frameworks. This is expressed in the following manner:

Okay, obviously as an OT, having to work in paediatrics, predominantly the tools that I've been using have been sensory integration (SI).[P1]

Also frequently cited was the arousal theory in relation to self-regulation:

I think for me, self-regulation is the ability to notice where I am at. The arousal model makes sense. Arousal is to me what the nervous system is doing. So where am I in terms of arousal and consciousness of that? And then, how do I regulate- how do I up regulate for down regulate? [P7]

[Self-regulation is]...the ability to independently bring oneself back to an optimal state of arousal. [P1]

Two salient common factors taken into consideration regarding self-regulation were, first, the relationship between the environment and the nervous system, as expressed:

I think environment is the key. [P1]

As a therapist and my exposure to sensory integration in relation to self-regulation, not every emotion is just pure emotion. Some emotion is based the reaction of your body to the environment. [P2]

And second, the important role of the social environment: the child's need for co-regulators:

...because I have been exposed to Sensory Integration, the approach I take is to remediate (try improve a child's tolerance to sensory inputs), educate, adapt their environment, and ensure that they have a 'co-regulator' [a parent/teacher]. [P2]

³ **Sensory integration (SI):** is the process by which we receive information through our senses, organize this information, and use it to participate in daily activities. SI therapy can only be executed by a qualified professional/OT. Therapy is practiced in a safe environment that includes sensory rich activities and equipment that will provide sensory input. Activities also aim to promote regulation of affect and alertness and opportunities for the child to make adaptive responses to increasingly complex environmental demands.⁵³

According to Vohs and Baumeister, the processes involved in self-regulation can be divided into three broad areas: sensory regulation, emotional regulation and cognitive regulation.⁵⁴ Sensory regulation was mostly spoken of during the interviews. As described above, sensory-regulation allows children to maintain an appropriate level of alertness in order to respond appropriately across environments to the sensory stimuli present.⁵³

The fact that OTs consider self-regulation from a sensory framework is likely a result of their foundational training in neuroscience and sensory processing.⁵⁵ Even Dunn²⁰ noted that the discipline of OT has a collective interest in the contribution of sensory processing to our understanding of human experience. Therefore, influential theories (the arousal model and sensory processing) largely inform OTs' understanding of possible underlying physiological components to self-regulation.

Lombard³⁸, in her book about sensory intelligence, highlights the point that OT differs from most other service providers who use a more cognitive, upper brain level approach when it comes to self-regulation. She emphasizes the unique role of OT - in that this field considers the lower, unconscious part of how the brain works and how it influences behaviour and performance.³⁸

Faure and Richardson⁵⁶ support the arousal theory, explaining that self-regulation is simply the ability to maintain homeostasis within the body⁴ and change our arousal level to meet and cope with the changing demands of the task or situation. However, children have instances where they are either over-aroused or under-aroused and therefore when they find difficulty staying focused they find their own ways to regulate.

The seminal work of Dunn^{20 (5)} who worked within the field of occupational and educational counseling, supports the role of environment. She hypothesized the relationship between a person's nervous system functioning in response to the environment and self-regulation strategies. This would imply that the reaction of a child's nervous system in relation to their environment will correlate with how they react and cope (either actively or passively) on an emotional and behavioral level. Literature also states that unlike adults, children in middle childhood do not have the freedom to seek out whatever will help them to self-regulate;

(⁴) **Human homeostasis** refers to the body's ability to physiologically regulate its inner environment to ensure its stability in response to fluctuations in the outside environment

(⁵) **Winnie Dunn** proposed that four sensory processing patterns characterize this perceptual coping process. These patterns are thought to arise from differences in neurological thresholds for stimulation (high-low) and self-regulation strategies (active-passive). Crossing these dimensions gives us four sensory processing styles (Dunn, 2001; 1997).

therefore they need guidance, opportunities as well as the activities to help them find and maintain an optimal arousal state.⁵⁶This explains why OTs consider it important to take into consideration the relationship between the environment and the nervous system as well as the need for co-regulators (the important role of the child's social environment). From this it becomes clear that the aim of self-regulation within OT is for a child to independently achieve and maintain an optimal arousal/calm-alert state in relation to the ongoing demands of the environment. This viewpoint makes self-regulation a skill, to learn how to help the body regulate in response to environmental demands.

1.2 Self-regulation: A Skill

OTs claimed that children tend to regulate spontaneously but this may be maladaptive to their well-being, thus they talked of self-regulation as a skill, a coping strategy, where a child can learn and adopt more socially and age-appropriate strategies to self-regulate. This was expressed as:

Parents go on that it's [self-regulation] an emotional or a characteristic or a personality-as a therapist and my exposure to it, I've seen that it's not necessarily a child's personality, but it's their coping strategies, which doesn't mean that it can't be changed. So it's almost just something that they've picked up and learned and that can be unlearned or retrained.
[P2]

Because a child's going to regulate, but are they going to regulate...they want to escape and avoid the stressful environment-we can't stop the kids from regulating, because-they're going to find a way. Yeah. It's just about doing appropriate, socially appropriate, age appropriate, yeah.[P2]

Up-skilling a child's capacity to self-regulate to foster engagement and well-being is supported by the notion that when there is a skill, there is a way.⁵⁷In their work with children with challenging behavior, Greene and Albon⁵⁷ argue that if a child could do well, they would. It is therefore the therapist's job to find out what factors are compromising a child's skill – as one OT expressed it:

...what might be the causative reasons for it [self-regulation]?"[P2]

Accordingly, in their therapy, the OTs aim to foster the skill of self-regulation by deliberately using a sensory-approach as part of their strategies to promote the skill of self-regulation in children in middle-childhood. From a sensory regulation viewpoint, OTs seek to create

positive sensory experiences that can help the body calm down in response to negative or positive stress.⁵⁸ This approach allows the child to create new neurological pathways, pathways that are healthier than those which have caused difficulties.⁵⁸ This approach and understanding overlaps closely with the Positive Psychology concept of constructive coping⁵⁹ and is further supported by Carol Dweck's work on growth-mindset.⁶⁰ The work on growth mindset shows that children who believe their talents can be developed (through hard work, good strategies, and input from others), have a growth mindset. They tend to achieve more than those with a more fixed mindset (those who believe their talents are innate gifts).⁶⁰

1.3 Self-regulation: OT Strategies

All the OTs spoke of the importance of understanding a child's unique sensory profile through investigatory assessments, for example, through history taking, interviews with the teachers and caregivers as well as clinical observations when interacting with the child. When it came to practical strategies participants called upon the respective frameworks that had most influenced them. Sensory integration (SI) appears to be the most common and central framework that shapes the OTs' understanding and interventions when it comes to strategies for self-regulation as the following quote shows:

I use the senses. I believe in sensory attunement and that it offers a way of tuning in to your body and surroundings. [P10]

All participants referred to sensory-based strategies drawn from sensory integration frameworks and some referred to the Alert-Program⁽⁶⁾ as being useful in promoting self-regulation. Whilst all therapists were familiar with SI, one adopted play therapy, the other bio-neuro-feedback and lastly, therapeutic listening as being their own primary vehicles for therapy in dealing with self-regulation (see table 3).

Table III: Self-regulation Strategies

Self-regulation strategies	Number of participants who cited this strategy	Percentage of participants who cited this strategy
Sensory-based approaches	10 [10]	100%
Alert-program	5 [10]	50%
Bio-neurofeedback	1 [10]	10%
Therapeutic listening	1 [10]	10%
Play therapy	1 [10]	10%

Of the sensory-based strategies mentioned, emphasis was placed on sensory modulation, using a tool known as a sensory profile, using specific sensory-based strategies that either calm or alert the brain and lastly using sensory-based equipment and resources in the physical environment to meet a child's sensory needs. Further detail is provided in Table IV.

Table IV: Sensory Strategies

Suggested sensory-strategies	Verbatim
<p>Emphasis on using a sensory modulation</p>	<p>+++ <i>Self-regulation strategies. Okay, obviously as an OT, having to work in paediatrics, predominantly the tool that I've been using have been sensory integration and, with more emphasis on sensory modulation [P1]</i></p>
<p>Identify sensory profile</p>	<p>+++ <i>I think my first state is to identify what the child's like profile or how the child presents and what might be the causative reasons for it. And then it's for the parent to know what it is. [P2]</i></p>
<p>Sensory strategies</p> <ul style="list-style-type: none"> • Identify which senses calm or alert the brain (see, hear, touch, smell, taste) • Slow rhythmic movement/deep pressure touch/pressure work/ Eat crunchy, chewy food – calms the brain • Fast irregular movement/ light touch alerts the brain 	<p>+++ <i>So self-regulation was definitely looking around how do we apply seeing, hearing, touching, moving, smelling, tasting [P1]</i></p> <p><i>it's [sensory-approach] about getting a child into a space where they are able to make appropriate choices and appropriate behaviour. Obviously in therapy we use a lot of sensory strategies. This helps to ground them [P7]</i></p>
<p>Adapt environment to suit sensory needs.</p> <ul style="list-style-type: none"> • Sensory swings • Trampoline • Tent in room • Crawl under a matt, go into a dark barrel • Weighted blanket • Body socks • Quiet time • Bubble bath • Quiet music 	<p>++ <i>Then, what I'm trying to do is get the environment to adapt [P2]</i></p> <p><i>[When communicating with a child]... "Which one do you want to do? Which one is gonna help your system today? They will do it and then after that we all say ok did this help or did that help? Do you feel better? Or don't you feel better? So we use that as regulation.... And teaching them! So your body has done this... This is how you felt... How do you feel now? Then helping them understand [p5]</i></p>
<ul style="list-style-type: none"> • Brushing protocol (ASI) 	<p>+ <i>We will use things like the brushing protocol, a lot of the pressure work [P5]</i></p>
<p>Note + signs signify estimate/guesses from the author of how important each aspect appeared to the participants in the qualitative case study, with a score between (+) and (+++) higher scores were accorded based on the popularity of the issue and how strong and clear the arguments were in their favour.</p>	

The OTs considered it worthwhile to remember that developing the skills of self-regulation is a process, a timely one, as expressed here:

Self-regulation doesn't just happen in one go- it is like when a child learns to walk, they crawl, creep, you then have to hold their hand until they take their first steps.[P2]

...because the seeds you plant don't all germinate at the same time. [P8]

While acknowledging the importance of intentional efforts to enhance children in middle childhood's self-regulation, Dr. Shanker, a distinguished research professor of Philosophy and Psychology with a special interest in self-regulation, confirms that cultivating the skill of self-regulation cannot be reduced to a generic program, but it is rather a process -one that it is ongoing and unique to each child.⁶¹ The OTs are trained towards understanding and respecting the fact that therapy is a client-centered process.⁽⁷⁾ A supporting framework of this is the doing, being and becoming model. This model fits well with the outlook of Positive Psychology, bringing to light the importance of not only enabling function but also well-being.⁽⁸⁾ Wilcock's work on doing, being, and becoming emphasized the relationship between doing and being and how this enables a sense of "becoming", in Positive Psychology terms, flourishing. Her work helps to build on a more nuanced understanding that the process of therapy is just that, a process. She cautions that this this process needs to honour the importance of purposeful activity but also acknowledge the importance of time, reflection and finding meaning and value in what we do.

Summary (theme one)

This theme highlights the point that, according to OTs, self-regulation is viewed largely from a sensory standpoint, it has to do with optimal arousal and how children are able to regulate their bodies to maintain this arousal within their environment. Self-regulation was seen as a skill that can be cultivated and a sensory approach is integral to this process. The next theme explores the OTs' use of mindfulness as part of the therapeutic process towards cultivating self-regulation for children in middle-childhood.

⁷Introduced in the 1940s by an American psychologist named Carl Rogers, as the name implies, **client-centered** therapy places significant focus on the **client**.

⁸Wilcock found it heartening to find that the health promoting and well-being directions had become increasingly recognized within WHO policies over the last 30 years have. Her work emphasized the importance of what people do (doing), how they experience and feel about what they do (being), that doing should encompass potential and meaning as well as the prerequisites of survival, and that the interactive nature of doing and belonging can be health giving (becoming).

Theme 2: Mindfulness as part of the OT process

2.1 OTs' Understanding of Mindfulness

The following findings emerged: a lack of clarity and consistency when describing their understanding of mindfulness; all the OTs were familiar with the term mindfulness but only two out of ten spoke of their use of mindfulness on a deeply personal level (indicating a good understanding of the concept). A noteworthy finding was that all participants were convinced that although the tools and techniques they currently use are not called mindfulness, they are still mindful by nature and that they use mindfulness in their therapy sessions with children. In this sense, all the participants' narratives were clear that they view mindfulness as strongly linked to and beneficial in promoting self-regulation. They thought it to be an important part or ingredient of the process.

When asked about their knowledge and use of mindfulness, the OTs initially seemed hesitant, as evident in the following quote:

Um, ah, I don't know how to answer that. [P5]

Most participants, (six of the ten) were all similarly hesitant. There was little consistency and clarity when it came to conceptualizing mindfulness. When further probed, participants tended to think of mindfulness as taking time to pause, to be present and to process. Their description gave mindfulness an "attentive" quality.

I think mindfulness starts with being able to stop and being able to pause. [P1]

For me mindfulness is about really having time just to process. To be connected. [P6]

Of all ten participants, only two were open about practicing mindfulness in their personal lives. The remaining eight, whilst familiar with the term, felt their knowledge of mindfulness to be limited. However, despite admitting to limited knowledge pertaining to mindfulness, all suggested that they practiced it in therapy.

I don't really, 100 %, understand what it [mindfulness] is! I just naturally, I think, use it. We are doing it but might not call it 'mindfulness'. [P4]

We just don't do it in the traditional way by going to meditate. [P6]

The belief that mindfulness is an inherent part of being a therapist is supported by Reid³ who reaffirms in her literature that practicing the art of OT requires sensitivity, because it is an art with meditative properties. Interestingly, therapists saw their chosen therapeutic modalities (sensory integration, bio-neurofeedback, play therapy and therapeutic listening) as mindfulness. As they aptly stated:

Gestalt is the here and the now. To me it is a mirror to look at the world. Specifically, within play therapy, it is not what you planned, read, it is not about your goals, it is about what the kid gives you right now. So what else is mindfulness? It is the same thing. [P10]

For me biofeedback is mindfulness. [P7]

Lastly, participants all referred to mindfulness as integral to self-regulation. Most referred back to the previous question about self-regulation when talking about mindfulness, as expressed here:

Um, I think ah, the way I use my, well my interpretation of mindfulness, or the way that I use it, is more in the um, like empowerment stage of self-regulation. [P6]

I think it's the first step towards of regulation. [P5]

Most participants described mindfulness in different ways as found in existing literature. While OTs understand mindfulness to be strongly linked to and beneficial in promoting self-regulation, they described it as a cortical state fostered by a “bottom-up process”. This is further explored in the next sub-theme: mindfulness and the brain.

2.2 Mindfulness and the Brain

Mindfulness was predominately viewed as a cortical, attentive state. The OTs referred to the bottom-up process, known as sensory regulation, in order to achieve and maintain this “cortical” state of mindfulness. The OTs generally said that they were helping children become mindful by helping more primitive parts of the brain filter and organize sensory information.

It's [mindfulness] hard to get there and it's hard to stay there as well. If we understand the brain hierarchy, in order to get to that cognitive state, we can use the sensory systems, which is the primitive brain state. Working through the low brain-states, the reticular activating system. Calming them running through the parasympathetic nervous system.

Then prep the brain for, to being cortical mindful. And that's why I think the two can be a wonderful marriage. [P1]

The participants' reference to mindfulness and the brain relates to the concept of "The Whole-Brain Child" discussed by Siegel and Payne Bryson in their book that helps people to understand the brain in a simple way: It's the upstairs and downstairs brain.⁶² It describes the downstairs brain as the control center for basic functions like breathing, strong emotions, and innate reactions to danger, like fight, flight or freeze responses. The upstairs brain is more complex and responsible for things like thinking, imagining, planning. One uses the upstairs brain to think critically, problem solve, and make good decisions. In Siegel's new book, *Mindsight*, he emphasizes a part of the brain that is largely responsible for managing energy and information flow coming from within the body and from the outside world – the middle-pre-frontal cortex, located in the upstairs brain.⁶³ This area of the brain is said to be responsible for nine crucial self-regulatory functions.⁽⁹⁾ During times of stress the upstairs brain can go off-line due to too much neural firing from the downstairs brain, which is a phenomenon he describes as "flipping the lid".⁶³

The OTs favoured using the "bottom-up" approach, first calming the "downstairs brain", which then allows for the upstairs brain to come back on-line. Being able to effectively self-regulate on a brainstem level (biological level) helps aid the child to effectively manage (energy and information flow) coming from inside their bodies and from the outside world.

For me, the idea of mindfulness is part of the process of them identifying how their body works.....Um, so you have to understand that the body goes in the fright/flight, how do you get them out to be mindful.... To use the frontal lobe. [P2]

Similar to the views expressed by the OTs, Shanker's work aims to try help people understand and respond to others (and themselves) by considering self-regulation across five interrelated domains: biological, emotion, cognitive, social, and pro-social.⁶¹ OT places strong emphasis on the biological domain and the impact that sensory dys-regulation at this level can have on the subsequent four levels. It was clear that OTs' focus on how sensory experiences can either stress or calm the brain, i.e. the "whole brain". The collective interest in sensory processing that OTs share helps people to understand the role that sensory

⁹**Nine functions of middle-prefrontal cortex:** This area of the brain is said to be responsible for nine crucial self-regulatory functions: body regulation, attuned communication, emotional balance/affect regulation, response flexibility, empathy –which he calls mind sight, insight or self-awareness, fear modulation, intuition and mortality (Siegel, 2010).

processing brings to our human experience. In this context, sensory processing can either enhance or hinder our capacity to be mindful.

2.3 Mindfulness Strategies

Dunn²⁰ states that OTs act as “translators” by taking abstract phenomena and making them applicable to practice. An important aspect of this study was to find out whether, if so, in what ways OTs apply mindfulness as a self-regulation strategy within their practice with children in middle-childhood. OTs stressed the importance of using the senses, the role of education, and, lastly, taking the environment into account.

All participants agreed that mindfulness is an invaluable life skill as mentioned in the following quotes:

OTs should be more mindful of mindfulness. [P2]

Mindfulness is a critical life skill. [P1]

It was also raised that mindfulness is valuable as it has pragmatic advantages.

As a technique it is useful [mindfulness] - there's no equipment, it's you and your body and it works the mind-body connection.[P8]

2.3.1 Senses.

The OTs favoured using a sensory approach towards cultivating mindfulness in children during middlechildhood due to their experience and exposure to sensory integration and childhood development. They emphasized the role of the senses in the mind-body connection, explaining that senses enable one to connect directly with the body in the here and now, helping to regulate arousal, especially if children are in flight/fright mode. A sensory approach could serve as a pathway towards mindfulness –which OTs view as a more cortical state. Once in this state, one can then teach the language and strategies of mindfulness, taking into account a child’s developmental level.

The senses could therefore be a means to connect and befriend the body according to the OTs as they stipulated:

Start off with them first befriending the body. So it's to make them not fearful of the body. [P7]

I think bringing sensory stuff in with kids makes it [mindfulness] more applicable. [P5]

Interestingly, when it is assumed that mindfulness is a skill, then it has to be taught and learnt. The OTs suggested that when learning something new, like mindfulness, a child has to be in the right “head space” to take in new information:

Because you're asking the brain to do something that it's not naturally designed for. [P9]

OTs spoke about using the senses as a means to regulate the child to be in the right space to take in and retain information - to learn the strategies and language of mindfulness.

Um, so you have to understand that the body goes in the fright/flight, how do you get them out to be mindful? [Sensory approach] helps you to just get back to the space where people can then speak to you on a more cognitive frontal lobe level. [P2]

Taking a child’s neurological development into account is also important according to the OTs. A child in middle-childhood cannot be expected to have the resources of language and attention span to easily adopt mindfulness.

In light of sensory integration, children are not fully integrated in terms of their neuro-anatomy [P7]

Therefore children during middle-childhood may not have the vocabulary to express their sensations, ideas, feelings and thoughts (SIFT), an acronym given by Siegal.⁶⁴

...children who don't have the language, how are you going to use this concept of mindfulness? [P8]

The OTs suggest that providing children with words and choice could help:

So you have to supply them with the words, so that they can chop and choose and say, "What you're describing there it sounds, like the one. I choose that one. [P9]

The integration of the sensory approach and mindfulness is expressed in the following quote:

We use all five senses. There is a lot being written about mindfulness and its practice, but with kids, I tune into the senses! So I am saying take two concepts [sensory approach and mindfulness], integrate it for yourself. Marry them, because then you will be a better

therapist. [P8]

The OTs suggested that using a sensory approach could be a means of integrating mindfulness within therapy in a uniquely occupational therapeutic way.

- Firstly, that senses can be a means to connect with and befriend the body is supported by current mindfulness programs being implemented in schools. One program in particular, Mindfulness in Schools Project (MiSP),⁸ encourages children to inhabit the “sensing mode” where they are more connected to the here and now through physical bodily sensations. The programme suggests that children inhabit their heads and not their bodies. This bond between the senses and mindfulness is further supported by a recent systematic review,⁶⁵ investigating the efficacy of mindfulness in schools.
- Secondly, children need to be mindful in order to absorb and learn the skills of mindfulness because our brains are not wired towards this skill. This is supported by theories of negativity bias and the effects on stress and the brain.⁶⁰
- Thirdly, that children need help with the cognitive/language component to mindfulness is supported by Siegal’s work,⁶² that children need to be provided with words to help “name and tame” what sensations and feelings arise when practicing mindfulness. In addition to this, auditory processing only fully integrates by age fifteen years.⁶⁶ The fact that children’s upstairs brains are still a work-in-progress makes the marriage between the “bottom up” sensory approach and mindfulness a plausible one.

However, one important component of mindfulness that was untouched by the OTs was the value of compassion. Setting an intention of non-judgment to the practice, according to Kabat-Zin,⁶ is fundamental to the practice of mindfulness. Children are given sensory strategies but little mention was made of how to frame the sensory experience, or contain it with a sense of compassion. The framing of the sensory experience is integral to mindfulness as a self-regulation strategy, since, for example, containing the senses with compassion aligns the child’s inner environment with the entire process. Instead, the OTs emphasized the importance of the outer environment in conjunction with using a sensory approach.

The use of the outer environment for the application of mindfulness for children in middle childhood is offered next.

2.3.2 Environment.

Space is a tool used by OTs to create optimal arousal, and they refer to this as a method to adapt the outside to regulate the inside. Crafting the environment to enable a state of mindfulness was advocated as quoted

You have to create the right environment. [P4]

Cultivating an environment aimed at lowering arousal, to counteract sensory overload¹⁰ was suggested:

I think mindfulness is being in a lower state of arousal. So I think the key lies in environment. It creates an immediate sense of containment. So you have to reduce the stimulation creating an environment where you can be mindful. [P2]

The OTs combined various aspects related to the creating of the environment such as taking into account the time and tools and who else forms part of that environment. If mindfulness appeals, it should be practiced regularly, using human voice-over mobile apps, and starting off with five-ten minutes then increasing to twenty minutes (being time- sensitive) possibly at the beginning of every session. If doing mindfulness in groups, they suggested that the groups should be small with a maximum of four children. In a class environment practicing mindfulness when they come back from break was recommended.

2.3.3 Education.

Thirdly, the importance of education was taken into consideration; not just the education of the child but also of the family members and caregivers –those that form the child’s social environment. To ensure that mindfulness becomes a sustainable strategy, practicing mindfulness not just in the session but also at home was mentioned. For this to happen the child, parent and teacher have to understand why they are being advised to practice mindfulness.

Educating...Education. Education for parents, education for children. Helping them to understand why they are doing it”[P7]

¹⁰ **Sensory overload:** occurs when one or more of the body's senses experiences over-stimulation from the environment. Bright lights, loud noises, unfamiliar surroundings and situations, all of these can create stress—and sensory overload—for children with sensory processing issues. It can also create anxiety over situations that lie ahead. That's especially true if children aren't prepared or are worried about unexpected things happening.

When it comes to education, when explaining the why and how of mindfulness, using analogies and stories to make it relatable was deemed important:

Definitely analogies. Definitely stories, bucket, Winnie the pooh... [P5]

The OTs suggested the use of a strength-based approach as expressed in the following quotes:

I put it in a positive frame. What I use with them and young adults is the term Peak performance. [P8]

Importantly, being mindful of not forcing the approach of mindfulness was stressed:

So I would discuss it with him, and see what works, and if it doesn't work at home there is no pressure but I would continue with them in a session. Because I know with myself, my own ready to learn meditation practice is not that regular, so I know how hard it is. So it takes quite a disciplined person to do it.... So I think with kids you do not wanna you don't to put pressure on them, but one hopes then that later in their lives when they come across it that seed will be planted. Because the seeds you plant don't all germinate at the same time. search not be dogmatic, and sincerity is the most important part. [P8]

The trust must be there.. [P10]

Supporting research claimsthat developing a shared language between the parent, child and therapist when it comes to learning new skills, in this case mindfulness.⁶⁴Enabling a child to build their vocabulary related to socio-emotional experiences is important for developing self-regulation and the daily use of mindfulness.⁶⁴ Studies argue that when educating children it has to be playful enough to keep them engaged and simple enough for them to understand.⁸

Summary (theme 2)

The second theme shows that there is a lack of clarity and consistency when it comes to the OTs' understanding of mindfulness. Despite limited knowledge of mindfulness, all mentioned that the tools and techniques they currently use are mindful by nature, and for this reason they suggested that they use mindfulness in their work with children during middle-childhood. All indicated that mindfulness is strongly linked to and beneficial in promoting the process of self-regulation, as they believed mindfulness to be a more cortical attentive state, necessary for self-awareness and reflection, especially when it comes to tuning into the body. The OTs referred to the bottom-up process, known as sensory regulation, in order to help, achieve

and maintain this “cortical” state of mindfulness. The OTs were convinced that they were helping children become mindful by helping more primitive parts of the brain filter and organize sensory information. Given this understanding of mindfulness and its integration of sensory regulation, they spoke about how mindfulness can be applied so it can be practiced as a self-regulation strategy for children in middle-childhood. The OTs pointed out that mindfulness therapies (used by OTs) will typically use elements related to the senses, the environment and education. The elements of these strategies are especially applicable to the life stage of middle-childhood, whether they have developmental and/or neurological difficulties or not – for both populations, clinical or non-clinical.

Theme Three: OTs working with children in middle-childhood

A common thread through the various interviews was the importance of understanding self-regulation and mindfulness in the context of middle-childhood as well as what potential challenges could arise. Mindfulness was frequently viewed as a self-regulation strategy that poses minimal risks and was commonly viewed as an important life skill in the context of middle-childhood as is expressed here:

No, I don't think there can be harm caused at all. I do think, I think it's going to become a critical life skill going forward. [P1]

Secondly, mindfulness was seen as a strategy that can be used with both clinical and non-clinical children in middle-childhood. A general thread was that whilst the need for mindfulness, especially in light of the clinical population, is definite, teaching mindfulness to these children may be difficult. Despite greater difficulty with application it could be highly beneficial with children who suffer from ADHD and anxiety:

And I think ADHD type of children also will struggle to get to the mindful state- But for them particularly I would definitely do it.[P1]

I think for your anxious child, you might find that it's easier to get them into a mindful state. But also maybe keeping them there would be difficult. [P1]

The OTs cautioned about using mindfulness with children who suffer from autism, unless they are high functioning on the Asperger scale.

I do think it's got to be very difficult to get to a mindful state with an autistic child- I wouldn't even, I don't think I will try it with them unless they're highly on the Asperger scale and they're really high functioning. [P1]

Lastly, only one participant mentioned that mindfulness might not be the right tool for those afflicted with trauma.

The parietal and the occipital lobes hold that trauma and is there is a dis-regulation in those areas that are often they have sensory issues...Mindfulness might not be the right tool at that time. [P7]

When working with children where trauma is suspected, mindfulness is cautioned. Titration is a concept borrowed from chemistry that Peter Levine⁶⁷, creator of the Somatic Experiencing method, uses to illustrate how to approach traumatic material. Levine⁶⁷ gives the example that if one were to mix two reactive chemical compounds all at once, the result would be an explosion. However, if one uses a glass valve and mixes them one drop at a time, the result would be safe; each drop creates a small, manageable fizzle.

Summary (theme 3)

The application of mindfulness as a self-regulation strategy for children in middle childhood was indicated by OTs referring mostly to the therapeutic aspect of their work with children in middle childhood. The OTs provide therapy, i.e. strategies including the use of mindfulness to promote self-regulation, for conditions that include the whole spectrum of severe to mild difficulties impacting their functioning. In other words, mindfulness as a self-regulation strategy (used by OTs) will typically use elements related to the senses, the environment and education. This theme highlighted the importance of mindfulness as a self-regulation strategy in the context of middle-childhood and showed that it is seen as a critical life skill, applicable to both clinical and non-clinical populations. Caution as to the skilled user applying mindfulness to cases where ADHD, anxiety, autism and trauma are present, was emphasized.

CONCLUSION

The research exploring OTs' knowledge and use of mindfulness as a strategy to enhance children in middle childhood's self-regulation shows that OTs offer pragmatic approaches to using mindfulness as a self-regulation strategy. The first finding shows that the OTs viewed self-regulation largely from a sensory perspective as having to do with optimal arousal (in other words, how children are able to regulate their bodies to maintain this arousal within their environment). Self-regulation was seen as a skill that can be cultivated and a sensory approach is integral to this process. The second finding revealed that although the OTs' knowledge of sensory processes in the use of strategies to cultivate children in middle childhood's self-regulation is commendable, there is a lack of clarity and consistency when it comes to their understanding of mindfulness. But, despite limited knowledge of mindfulness,

all mentioned that the tools and techniques they currently use are mindful by nature, and for this reason the OTs suggested that they use mindfulness in their work with children during middle-childhood. All indicated that mindfulness is strongly linked to and beneficial in promoting the process of self-regulation, as they believed mindfulness to be a more cortical attentive state, necessary for self-awareness and reflection, especially when it comes to tuning into the body. The OTs were convinced that they were helping children become mindful by helping more primitive parts of the brain filter and organize sensory information. Given this understanding of mindfulness and its integration with sensory regulation, they spoke about how mindfulness can be applied to practice as a self-regulation strategy for children in middle-childhood. The OTs pointed out that mindfulness therapies (used by OTs) will typically use elements related to the senses, the environment and education.

The elements of these strategies are especially applicable to the life stage of middle-childhood, whether they have developmental and/or neurological difficulties or not – for both populations, clinical or non-clinical. The last theme highlighted the importance of mindfulness as a self-regulation strategy in the context of middle-childhood. The OTs referred mostly to the therapeutic aspect of their work with children in middle childhood which includes strategies using mindfulness to promote self-regulation covering the whole spectrum of severe to mild difficulties impacting children's functioning. Caution as to applying mindfulness to cases where ADHD, anxiety, autism and trauma are present, was emphasized. However, OTs viewed the use of mindfulness as a self-regulation strategy as beneficial, applicable to all children in middle childhood, i.e. whether they are dealing with particular difficulties related to disability or not.

In conclusion, the ways in which OTs view and use mindfulness is largely governed by a sensory standpoint, using mindfulness in tandem with sensory regulation to promote self-regulation. In this sense, OTs view mindfulness as a critical life skill, applicable to both clinical and non-clinical populations. They believe mindfulness to be strongly linked to and beneficial in promoting the process of self-regulation in the context of middle-childhood. However, despite this belief in the use of mindfulness as a self-regulation strategy, findings indicate that there is a lack of clarity and consistency when it comes to the OTs understanding of mindfulness. Whilst their knowledge of mindfulness appears limited, all were confident that mindfulness is an inherent part of their therapeutic practices, and use it implicitly in their practice with children during middle-childhood.

Recommendation

There is little research to date on Occupational Therapy and the field of Positive Psychology. There are even fewer published articles on mindfulness and its role within the profession of OT. Current research focuses largely on mindfulness and its applications with adults or as a practice for therapists/students in training themselves to relieve stress and job burnout. It is recommended that future research explore how mindfulness can be used within the positive approach of psychology by looking at the sensory and bodily aspects of such strategies as suggested by OTs.

The intention of this study was to provoke further thought and discussion within OT as to how mindfulness can be applied as a self-regulation strategy, specifically in the context of middle-childhood. OT, like Positive Psychology has always promoted a truly interdisciplinary approach, by integrating knowledge and harnessing ideas generated within related disciplines. The hope of this study is for cross—pollination to occur between two fields with shared commonalities that aim to promote health and wellbeing among individuals, such as children in middle childhood and their communities.

Implications of the findings for practicing OTs in the Western Cape entail a willingness for a better understanding of mindfulness as a strategy to enhance all children in middle childhood's self-regulation. This means that OTs could benefit from further investigation into the field of Positive Psychology and all that it entails, especially in relation to mindfulness and its potential use in practice with children in middle-childhood directed by particular strengths, such as self-regulation. At the same time, insights offered by the OTs could add to the tapestry of the theoretical underpinnings of self-regulation and mindfulness within Positive Psychology and its pursuit for more of a sensory (“neck-down”) understanding and real-world applications of such concepts.

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SECTION 3

SUMMARY, REFLECTION, RECOMMENDATION AND CONCLUSION

Section 3

Summary, Recommendations, Reflections and Conclusions

3.1 Introduction

This section of the report provides a summary of the research problem as well as the methodology that was used in the study. A summary of the research findings is given, followed by a short version of the researcher's experience as well as an evaluation of the research process. The section will be concluded with the strengths and limitations of the study, followed by recommendations and conclusion.

3.2 Summary of the research problem and literature review

3.2.1 Research topic.

The research study explored paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. A qualitative descriptive design was used. Understanding the occupational therapists' (OTs) knowledge and use of mindfulness as a strategy can contribute to promoting children in middle childhood's self-regulation. The information gained will also be beneficial for OTs working with children in middle childhood.

3.2.2 Research problem.

Emerging studies within Positive Psychology (PP) have shown that mindfulness can be an effective medium to promote self-regulation and well-being (Niemic, Rashid, & Spinella, 2012). It has been proposed by researchers that mindfulness can be cultivated as an internal self-regulatory resource to foster resilience, resourcefulness and well-being (Kabat-Zinn, 2013). Also, recent research is starting to investigate the compatibility of Positive Psychology frameworks within the practices of Occupational Therapy (OT) (Nakamura & Csikszentmihalyi, 2014). However, little research to date investigates how mindfulness is used by occupational therapists (Reid, 2011).

With the intention to address such a gap and broaden the scope of OT to include Positive Psychology insights and tools, theoretical frameworks within Positive Psychology were explored with particular reference to concepts such as self-regulation, mindfulness, positive education, grit and self-control, resilience, positive neuroscience and positive health. Guiding frameworks explored within occupational therapy included neuro-developmental theory, sensory-integration and play therapy. The consilient field of Interpersonal Neurobiology was also used as an overarching framework to integrate mindfulness and self-regulation within the context of middle-childhood.

3.2.4 Research question.

The research question directing this research was formulated in the following way: In what ways do paediatric occupational therapists use mindfulness as a self-regulation strategy for children in middle childhood?

The focus of this research was therefore to explore paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. Knowledge in this study focused on practical knowledge guiding the Occupational Therapists (OTs) use of mindfulness in the context of their sessions with children in middle childhood. In this sense, knowledge entails actual knowledge about the needed subject matter, i.e. mindfulness, self-regulation and children in middle childhood, as well as an understanding of the common conceptions, misconceptions, and possible difficulties about these matters.

3.2.5 Research aim.

The aim of this research was to explore paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood.

The objectives of this qualitative study entailed the following:

- i) Explore OTs knowledge and use of self-regulation strategies in middle childhood.

- ii) Explore their their knowledge and personal and professional use of mindfulness as a self-regulation strategy.
- iii) Explore how they do or would apply mindfulness as a self-regulation strategy for children in middle childhood.

It was important to gain this information from the OTs to explore what therapeutic practices and tools they apply to cultivate self-regulation and in what ways they see mindfulness as being beneficial in promoting self-regulation. In addition to explore typical mindfulness tools or activities that are or could be used to promote the practice of self-regulation in therapy. And lastly, to explore what type of children in middle childhood, in their opinion, benefit most or would benefit from mindfulness; which children have or would have difficulty in adopting mindful practices.

3.3 Research procedures

The researcher used a qualitative method to gather data to address the research problem, since the aim of the research study is to explore (i.e. understand and describe) the participants' knowledge and use of mindfulness as a self-regulation strategy applicable to middle childhood. The population of this research included all OTs in the Western Cape Peninsula area who have experience of working with children in middle childhood.

A purposive sampling method was used to ensure participants with specific characteristics were selected (Braun & Clarke, 2013, p. 56). Ten participants were selected. They were female OTs who complied with the inclusion criteria and were English and Afrikaans speaking. All participants signed consent forms.

Semi-structured individual interviews were held in different venues and different times. Data were collected at either the therapist's personal home or practise office and the necessary arrangements were made. The interviews were typically conducted in the afternoons, after the therapists had finished with their working day.

Semi-structured individual interviews were held with all participants. At the start of the interview a demographical questionnaire was used to obtain relevant biographic information

about the participants (See addendum C). The interview was then guided by an interview schedule (See addendum D). Questions related to the objectives of the research namely: what is their knowledge and use of self-regulation strategies in middle childhood? What is their knowledge and personal and professional use of mindfulness as a self-regulation strategy? And lastly, how do or would they apply mindfulness as a self-regulation strategy for children in middle childhood?

The individual interviews were audio recorded with the consent of the participants and transcribed afterwards. After the interviews, the researcher made notes of her observations.

The trustworthiness of the study was ensured by implementing the principles of credibility, confirmability and transferability (Braun & Clarke, 2013). This was done in the following manner: To guarantee credibility, the researcher recorded all individual interviews, listened to the recordings many times to familiarise herself with the information and transcribed the recordings herself. To make certain of transferability, the researcher described the context, participants, settings and circumstances of the study in detail. With regards to dependability, the researcher made sure the research process was coherent, well developed and reviewed. Finally, to ensure confirmability, the researcher kept evidence of all the data analysis.

The necessary ethical procedures were followed to get permission for the study by HREC and OTASA.

The necessary consent forms were signed (refer to Section 4, Addendum B) Participants participated voluntarily and were not coerced in any manner. Participants were treated with warmth and respect and every precaution was taken to ensure their protection. Privacy and anonymity was guaranteed by taking all participant names out of the report and each participant was allocated a code (number). Their names did not appear on any documentation pertaining to the study.

3.4 Research summary

Thematic analysis allowed for the identification of themes via deductive reasoning and categories via inductive reasoning (Braun & Clarke, 2013). Three main themes emerged: the first theme is about the OTs' understanding of self-regulation; the second theme covers the OTs' knowledge and use of mindfulness in middle childhood; and the third theme is about middle childhood and the field of OT.

The findings indicate that OTs refer mainly to the sensory process and particularly sensory regulation as a bottom-up process - in order to achieve a state of mindfulness. When it comes to the use of mindfulness in practice, the OTs stressed the importance of using the senses, the role of education, and taking the environment into account. The findings also suggest that the OTs view mindfulness as a critical skill, applicable to both clinical and non-clinical populations of children in middle childhood. These aspects are discussed in the following paragraphs.

Paediatric OTs' understanding of childhood development in relation to self-regulation, their unique sensory understanding of self-regulation and the role of arousal and energy in relation to mindfulness involves that a child's nervous system is not fully integrated during middle-childhood. Siegel (2009) shows that the developing brain confirms this idea stating that a child's prefrontal neural connections - responsible for stress-regulation - are still maturing. The levels of tolerance to stress of children in middle childhood are therefore narrower than adults, making it harder for them to effectively regulate without support. He notes that the immature brain requires the more mature brain (a parent/caregiver/teacher) to help develop the social, regulatory circuitry (Siegel, 2009). Co-regulation, mentioned by the OTs, is then necessary for developing the skill of self-regulation. Middle-childhood is thus a time of opportunity for interventions that focus on self-regulation skills and developing prefrontal neural connections.

The OTs' understanding of self-regulation is aligned with well-known experts such as Dr Shanker and Dr Siegel who stress the importance of the structure and function of the brain, especially in relation to subcortical regions like the brainstem and the reticular

activating system (Shanker, 2010). Understanding regulation processes within lower, subcortical brain regions is therefore important to the understanding of self-regulation on the whole (Shanker, 2010). In line with this, OTs provide a unique understanding of self-regulation from a sensory standpoint. OTs referred to the bottom-up (biological) process, known as sensory-regulation in order to help, achieve and maintain a state of mindfulness, which they feel to be more a more cortical process (upstairs brain) (Martini, Cramm, Egan & Sikora, 2016).

OTs work from a bio-psycho-social model therefore offering valuable biological insights in relation to psycho-social phenomena (Wade & Halligan, 2017). Their understanding around the biology of arousal and energy in relation to mindfulness is valuable (Reid, 2011). Hans Selye's well-known bell-shaped, stress-response curve depicts how performance increases up to a certain point of arousal and then drops as arousal continues to increase (Germer, Siegel, & Fulton, 2016). Too much agitation or anxiety interferes with optimal presence, as does sluggishness or indifference (Germer et al., 2016). Neither of these states is conducive for optimal presence. Sensory strategies, as suggested by the OTs, can be used to either alert or calm the brain, fuelling a type of energy conducive for mindful awareness (Niemi et al., 2012). According to Germer, energy is considered one of the seven factors of awakening in light of mindfulness training, alongside investigation, joy, tranquillity, concentration and equanimity (Germer et al., 2016). It is therefore relevant to the work that is being done on mindfulness within Positive Psychology (Greenberg & Harris, 2012).

Furthermore, the OTs provided useful pragmatic ideas as to how to implement mindfulness as a self-regulation strategy with children during middle-childhood. This is important as Reid, a Canadian OT, one of the few to publish articles based on mindfulness, notes that there is a degree of abstraction in the theoretical discussion of mindfulness and real-world challenges as to how practitioners can actually implement it (Reid, 2011). Studies show that teaching mindfulness-based techniques to children has to be somewhat different to teaching adults (Greenberg & Harris, 2012). Studies suggest that methods, materials and

activities should be more playful, with a focus on fun and with shorter periods of silence. The OTs provided ideas in line with this, suggesting sensory-based strategies that are both fun and concrete (Greenberg & Harris, 2012).

Therefore, a noteworthy contribution to the field of PP that OT provides is the concept of sensory-regulation and sensory-overload (where overstimulation from the environment can stress a child's nervous system impacting on their capacity for mindful awareness and effective self-regulation) (Dunn, 2007). Using the bottom-up process of sensory-based strategies can allow a child to self-regulate by re-establishing homeostasis within the body, creating a type of energy/optimal presence conducive for mindful awareness (Faure & Richardson, 2006).

Thus far the valuable insights the OTs have brought to the table have been discussed. However, a critique of the theoretical assumptions underpinning sensory-regulation and the linear approach to self-regulation proposed (bottom-up approach) is worthy of discussion. Secondly, the OTs agreed that mindfulness is a critical life skill towards fostering self-regulation, yet findings thus far indicate that the OTs' knowledge and use of mindfulness is somewhat limited to the sensory domain. A more comprehensive understanding and use of mindfulness as a self-regulation strategy within OT can be called for.

- Firstly, scientific models may be limited in their use for understanding and predicting complex relationships (Zimmer et al., 2012). Most of the ideas and opinions the OTs mentioned, stem from a sensory integration framework. The Sensory Integration framework has been criticized as somewhat linear and reductionist (Wilcox, 2016). SI is portrayed as being rooted in well-established, scientific models of neurological structure and functions. However, according to recent articles published in the field of paediatric neuroscience (Zimmer et al., 2012) basic concepts are unsubstantiated and some have been refuted by research. The reality is that there have only been small randomised control trials that show the positive effects of SI therapy (Zimmer et al., 2012). There is a need for more rigorous trials, using manual protocols to evaluate the effects that SI has for children. Ultimately, research regarding the effectiveness of

sensory integration therapy is limited and inconclusive(Zimmer et al., 2012).

- Secondly, using a hierarchical model to compartmentalize psychological processes such as self-regulation within the brain is not necessarily accurate (Barrett, 2017). The recent work of Barrett(2017) embraces the complexity of neural processing, especially in relation to the biology of emotion, proposing that the brain is a network rather than a triple story house-like structure (triune brain theory)(Barrett, 2017). She proposes that the brain is a massive network of high complexity rather than a single organ or a collection of 'mental modules' (Barrett, 2017).This one anatomic structure of neurons, bathed in a sea of neurotransmitters, constructs emotions based on an unfathomable number of spatio-temporal patterns throughout the entire network (a more whole-brain approach to understanding the biology of psychology) (Barrett, 2017). Barrett (2017) argues that the past two decades of neuro-scientific research has resulted in a paradigm shift in psychology and the understanding of the biological basis of emotions(Barrett, 2017).Such theories offer OT an exciting opportunity to broaden its landscape and explore the complexity of self-regulation with its many facets in the light of childhood development(Barrett, 2017).

When it comes to the understanding of Mindfulness, as put forth by OTs, a second key issue arises. Mindfulness was seen largely as a cortical process- more a form of attention training than anything else. Siegal(2010)argues that mindfulness is actually not only a form of attention training, but it is essentially“an integrative process that promotes well-being in body, mind and relationships”(Siegel, 2010, p.16).This implies that mindfulness is a concept that embodies much more than merely bodily awareness, which OTs focused largely on in the interviews.

Little was mentioned about the nature of the mind, in relation to mindfulness, during the interviews. This is important to note as teaching children to relate to experiences with an intention of compassion and acceptance is also pivotal if one remains true to the roots of mindfulness teachings(Kabat-Zinn, 2013). Mindfulness teachers speak of bringing intention to attention(Schonert-Reichl & Roeser, 2016). Bringing a sense of non-attachment to both joy

and pain enhances attention as less energy is expended in manipulating and avoiding unpleasant aspects of experience (Germer et al., 2016). This type of training (not just attention training) arguably helps children to be less agitated as they grow in their ability to accept moment-to-moment experience, allowing their minds to rest more comfortably within a wider range of events (Kabat-Zinn, 2013). Learning to be with difficult sensations rather than constantly aiming for optimal presence through positive sensory experiences is perhaps food for thought. According to Kabat-Zinn (2013) developing a mindset of non-judgment and compassion is a corner stone of mindfulness, a stone that was unturned by the OTs during the interviews. Developing strategies in addition to sensory ones, such as being non-judgmental and developing the ability to label and describe with words the internal world, can be pivotal for effective use of mindfulness with children in middle-childhood (Semple, Reid & Miller, 2005).

That said, what it is important to bear in mind is that there is no blueprint for learning mindfulness (attention and compassion) (Germer et al., 2016). An occupational therapist, Nelson (1997), expresses this tellingly: “Artistry involves the orchestration of broad strategies for grappling effectively with the uncertainties inherent in clinical practice integrating Positive Psychology frameworks, specifically mindfulness, alongside a profession’s own preexisting frameworks and those now emerging is what makes therapeutic practice a craft more than anything else” (p. 14). Occupational therapy emerged as a health profession in the 1910s, incorporating the mind, body, and spirit in a holistic approach to health (Nelson, 1997). Mindfulness within OT is arguably an important part of holistic practice which the profession takes pride in. Mindfulness can open up new vistas of unexplored potential within the field of OT, and these future possibilities are an important part of the core existence of OT, to promote human flourishing (Reid, 2011).

3.5 General summary: Researcher’s reflections

On a personal level this was a journey that posed unexpected challenges, ‘try’-umphs and growth. It was a eudaimonic process, where meaning came through hard work and

endurance. An in-depth understanding of the different approaches to self-regulation and mindfulness as well as the integration of these two concepts was gained. It was interesting to learn how a small group of OT paediatric practitioners in the Western Cape are approaching and thinking about these two concepts at present. It was a fulfilling journey, leading towards my own personal growth and development of potential. Becoming a 'masters student' was a humbling process. With the help of my supervisors, I felt equipped to endure the rigorous scientific process and develop the critical thinking skill that research demands.

My sincere hope was to present sound science and to harness my character-strengths of curiosity and creativity to integrate knowledge and tools within OT from other fields, in this case, the exciting and emerging field of Positive Psychology. In terms of the actual research process, methodological challenges associated with qualitative research proved to be my Achilles heel. Understanding the logistical, time-consuming and ethical parts of collecting and analyzing qualitative data proved to be my hardest undertaking. Throughout the exploration I tried my best to be attentive of my own bias and how this might affect the reliability of findings as well as to how my own personal preconceived ideas, personal beliefs, norms and values might impact the data analysis and write up. Feedback from supervisors helped to highlight and reduce personal bias, hopefully enhancing credibility and accuracy.

I found my interviewing skills wanting. OT is a field in which we were trained to conduct interviews. However, I found my skills to be lacking when it came to research-based interviews. I am truly fortunate to be in contact with an attentive and kind supervisor. She helped me to be mindful of the following interview strategies: allowing participants to fully and completely answer before commenting on the answer or continuing with the interview (this prevents any crosstalk from occurring, keeping the audio clear and audible); not 'leading' the participant or making suggestions for the participant (therefore preventing any 'power of suggestion' or putting words in their mouth); and lastly, also making sure that I include a glossary of industry specific terminology. In terms of the interview process I also experienced unexpected time delays. I hoped to conduct my interviews during school holidays but found

all the participants took longer than expected to respond and most were away at the time. I had to fit in the interviews during my own work time and theirs.

Transcribing and analyzing data proved to be the most time-consuming part of the journey. Reading and understanding literature was the fun part. Familiarization with the data was very difficult and time-consuming. Reducing ambiguity grammatically was also a big challenge. Being careful to include the right punctuation –like a comma or exclamation to emphasis the tone int which the phrase was said was tricky during the transcribing of the data. Immersion in data was the second biggest time constraint: I listened to the audios repeatedly through my aux cable when driving, walking and like activities to see what patterns and ideas I was able to absorb in this “diffuse mode of mind.” I then read and re-read the transcriptions. Reading and listening to the whole set before coding to get an overall understanding was a big help for me. During this process I asked myself:

- What are my general observations?
- What preliminary patterns, namely ideas and similarities, have I been able to identify so far?

My initial reaction was to jot down my findings in no particular order and with no specific structure, just to write down as much as possible about what I felt to be the most dominant reasons and observations. Again, I wrote in a journal everyday to try ensure a true reflection and correlation between initial and eventual reporting.

Generating initial codes proved to be harder than I thought. I created a primary list of ideas, organized them into significance groups, then gave codes and slowly an overall set of themes began to evolve. I tried my best to ensure that the data inside the themes was meaningfully related and the themes were explicitly differentiable. Lastly, defining and naming each theme was difficult and went through several changes. Eventually the themes were reached through defining and refining. It was only when findings were discussed and confirmed by the supervisor and co-supervisor that my confidence and sense of validation began to emerge.

How to write scientifically proved challenging: how to organize research findings and to identify and link appropriate theoretical and/or empirical findings with findings from the study, without bias, was my most difficult challenge. Remaining focused on the research question and not being side-tracked by the abundance of literature available in the fast-growing and exciting fields of Positive Psychology, Occupational therapy and Mindfulness was also tough.

Alongside the challenges of the masters process was the awareness of how much Occupational Therapy has to gain from Positive Psychology. I was intrigued how challenging pre-existing models such as our medical models are to be more informed by growth models and how potentiality models can enlighten our deficit-focused mind-set and models. It urges me to become the kind of professional that continues the pursuit for further integrative thinking. I realized how mindfulness can and is being used not just for the clients but the therapists themselves, given the high rate of burnout in our profession. It helped me become somewhat more critical of our treatment modalities in that they are mainly available for those who have access to OT services and those that can afford a continued cost of care. Mindfulness offers a lowcost, wide range of techniques that can be made easily available for people across culture and class as there are few, if any, resources required in practicing the art of mindfulness.

The idea that psychology is more than just a “neck-up” approach excites me and I hope to continue exploring how biology, neurology and interpersonal neurobiology all play a role in health and well-being.

On the topic of health and wellness, I encountered personal challenges during my enrolment in this masters program. I encountered major health difficulties the consequence of which were further time delays. It was a time in my life where languishing and floundering felt more familiar than flourishing. Positive emotion, engagement and achievement were at an all time low. However, the impact of relationships and the support given to me, particularly from my mother and supervisor, were strong holds. On top of this, having something to strive towards- the completion of this study and contribution towards scientific research- provided meaning that was an anchor during what were very wavering years.

The immense opportunity to receive guidance from a qualified expert supervisor and co-supervisor was invaluable. Without them I would never have felt confident in the final product nor had the willingness to testify towards the trustworthiness and transparency of the study.

Overall a treasured and enlightening experience. I was in awe of the wellspring of research that can be found when placing just a few words, like “self-regulation” and “mindfulness” under the microscope of scientific enquiry. On top of this I felt part of a growing community, that of Positive Psychology, and grateful that I am exposed to all its treasures that I can now share in my professional place of residence.

3.6 Implications

The findings of this study provide insight into the OTs unique sensory understanding of self-regulation as well as their pragmatic approaches to using mindfulness as a self-regulation strategy (taking into account the biology of psychology) within middle-childhood. Given that psychology is typically a cognitive and intellectual (“neck-up”) endeavour (Siegel, 2009), Positive Psychology is starting to ask deeper questions pertaining to positive health, such as the neurobiological basis of ‘the good life’. Such insights offered by the OTs during the Waterman (2013) interviews, could add to the tapestry of the theoretical underpinnings of self-regulation and mindfulness within Positive Psychology and its pursuit for more of a sensory (“neck-down”) understanding and real-world applications of such concepts. At the same time, OTs could benefit from further investigation into the field of Positive Psychology and all that it entails, especially in relation to mindfulness and its potential use in practice with children in middle-childhood. This marriage of the mental and the physical can be expressed as: Each mental activity has a physical component and each physical activity has a mental component. Therefore, there are multiple and fruitful implications for practice within the field of Positive Psychology, for example, positive interventions aimed at strengthening self-regulation for children in middle childhood (non clinical population) as well as Occupational Therapy, for example, therapeutic practices aimed at the promotion of self-regulation for

children in middle childhood (clinical population).

3.7 Limitations and recommendations

There are significant limitations to this qualitative study: qualitative research is mostly open-ended with participants having more control over the content of the data collected (Braun & Clarke, 2013). This makes it difficult to verify the results objectively against the ideas and opinions of the OTs in relation to the questions asked. Sweeping claims made about sensory-regulation as a causal root of optimal self-regulation, mindfulness as a cortical process as well as the use of sensory-based approaches as pathways towards mindfulness can be misleading. This makes it difficult to know if and how mindfulness can be used within OT in order for it to be an acceptable and feasible self-regulation strategy.

Given that this is a small sample study, constraints apply to the generalizability of the study and the utility of the findings in practice (Braun & Clarke, 2013). Only one qualitative modality was used: a semi-structured interview process, asking only three open-ended questions. Variability is also a significant issue as only ten OTs within the Western Cape were interviewed and of the ten interviewed, the majority use Sensory Integration (SI) in their work with children and only two have a personal use and understanding of mindfulness. Results would likely vary if more OTs were interviewed, especially those using frameworks other than sensory integration. Coverage bias is another issue as, given the small sample size, a large number of OTs, possibly already working with and integrating mindfulness in their practice with children, do not appear in this sample frame. Lastly, volunteer bias is also a limitation to this study as only a small number had access to the opportunity to take part in this study as it was limited to OTASA members where the advertisement for the study could be posted (Braun & Clarke, 2013).

Lastly, definitions of self-regulation and mindfulness proposed by the OTs largely neglected relational, cultural, social, economic, and situational phenomena associated with self-regulation and mindfulness. The findings are also restricted to a middle-class, western socio-economic value system as this is the context that all the OTs interviewed live and

practice within.

Recommendations

Regarding the research agenda, there is a need for more high-quality studies. Given that this is a mini-dissertation, a small sample was used to reduce the labour-intensive approach that a larger sample would demand. However, going forward, to improve the variability of the study, interviewing a larger sample of OTs working across provinces, frameworks, and fields would be advised. The following is suggested for future research:

- To involve OTs working not only in the field of paediatrics but also in mental health
- To involve not just children but also adults
- To involve OTs working in the private and public sectors.
- To improve coverage, opting to do Skype interviews could also reduce time pressures on both the OTs and the researcher, allowing for more interviews to be done.

To further improve trustworthiness and triangulation (Braun & Clarke, 2013), it would be advisable to use more than one methodological approach (interviewing). For example, one approach could be to track down case studies based on the use of mindfulness in OT paediatric practice with children in middle-childhood. A future study could look at adapting mindfulness-programs for the purpose of OT and using pre and post-tests such as MAAS (Mindful Attention Awareness Scale) (Trowbridge et al., 2017) as well as OT self-regulation scales to try to quantitatively measure the effectiveness of mindfulness as a self-regulation program for children in middle childhood (Shapiro, Brown & Biegel, 2007).

Since evidence-based studies regarding the benefits of mindfulness-training in adults have been shown in several reviews and meta-analyses, it is recommended that future research further explore what mindfulness-based practices could best benefit children and adolescents (Zoogman, Goldberg, Hoyt & Miller, 2015). This is recommended especially within the field of Occupational Therapy, seeing that the study of mindfulness and children is still in its infancy (Reid, 2011).

It is also recommended that research critiquing the theoretical assumptions underpinning sensory-regulation and the linear approach to self-regulation must be done. This is suggested for the following reasons:

- Firstly, literature argues that basic SI concepts have been unsubstantiated and some refuted, resulting in research on the topic of SI being limited and inconclusive (Parham, Cohn, Spitzer & Koomar, 2007).
- Secondly, SI is critiqued as being linear and reductionist (Parham et al., 2007). Using a linear, hierarchical model to compartmentalize psychological processes such as self-regulation within the brain is not necessarily accurate. The recent work of Barrett (2017), embraces the complexity of neural processing, especially in relation to the biology of emotion, proposing that the brain is a network of high complexity rather than a triple story house-like structure (triune brain theory) (Barrett, 2017). Such theories offer OT an exciting opportunity to broaden its scientific landscape and explore the complexity of self-regulation and its many facets in the light of childhood development.

Going forward, this study calls for the further harnessing of concepts explored by Positive Psychology within OT. Further investigation of concepts within Positive Psychology, such as self-regulation and mindfulness, could yield valuable insights and important implications for OT practise. In addition, Positive Psychology could benefit from insights within OT, a profession that, despite its different approaches, also grapples with how to enable well-being in individuals and communities.

3.8 General conclusions (of the study)

The aim of this research was to explore paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood. The first finding shows that the OTs' distinctive sensory understanding of self-regulation is noteworthy (taking into account aspects of the biology of psychology). Seeing that OTs work from a bio-psycho-social model (Wade & Halligan, 2017), they provide an understanding of self-

regulation by taking into account regulation processes that occur within lower, subcortical brain regions and their impact on self-regulatory behaviour (Dunn, 2007). The OTs referred to the bottom-up (biological) process, known as sensory-regulation, which is used to achieve and maintain an optimal level of arousal, fuelling a type of energy conducive to mindful awareness. The use of the bottom-up process of sensory-regulation and sensory-based strategies is important in allowing a child to self-regulate by re-establishing homeostasis within the body (Faure & Richardson, 2006), creating a type of energy and optimal presence conducive to mindful awareness. This understanding of the biology of arousal and energy in relation to mindfulness is valuable and relevant to the work that is being done on mindfulness within Positive Psychology.

The second theme reveals that OTs offered pragmatic approaches to using mindfulness as a self-regulation strategy. While existing research shows that there is a degree of abstraction in the theoretical discussion of mindfulness (Reid, 2011), the OTs offered some guidelines amidst real-world challenges as to how to actually implement it. Furthermore, it was suggested that teaching mindfulness-based techniques to children proves even more challenging in that it has to be somewhat different to teaching adults (Greenberg & Harris, 2012). Studies suggest that methods, materials and activities should be more playful, with a focus on fun and with shorter periods of silence (Greenberg & Harris, 2012). During the interviews, OTs provided pragmatic ideas as to how to implement mindfulness as a self-regulation strategy with children in middle childhood. These ideas were largely sensory-based and arguably fun and concrete.

It must be highlighted, however, that most of the ideas and opinions the OTs mentioned stem from a sensory integration framework. Sensory integration, like any given scientific framework, may be limited in its use for understanding and predicting complex relationships.

The OTs agreed that mindfulness is a critical life skill towards fostering self-regulation, yet findings thus far indicate that the OTs' knowledge and use of mindfulness is somewhat limited to the sensory domain. A more comprehensive understanding and use of

mindfulness as a self-regulation strategy within OT can be called for.

This finding calls for the OTs to develop further knowledge of mindfulness. During the interviews, mindfulness was largely seen as a way to cultivate attention. In contrast, to thinking of mindfulness as only a form of attention or affect-training, it is proposed that mindfulness is an integrative process that promotes well-being in body, mind and relationships (Siegal, 2010). This implies that mindfulness is a concept that embodies much more than just awareness of the body. Bringing a sense of compassion and non-judgement into this type of training arguably helps children to be less agitated as they grow in their ability to accept moment-to-moment experience, allowing their minds to rest more comfortably within a wider range of events (Greenberg & Harris, 2012). William Blake captures the art of mindfulness in this quote: He who binds to himself a joy Does the winged life destroy. But he who kisses the joy as it flies Lives in eternity's sunrise (Germer et al., 2016, p.14).

The third theme covers the importance of developmental timing for the mastering of developmental tasks. Apart from middle childhood as a time of opportunity to teach the typical three R's, namely, arithmetic, reading and writing, it is, importantly, also a time of opportunity for mastering the other three R's, "namely, resilience, reflection and regulation" (Siegel, & Bryson, 2011, p. 113). In other words, middle-childhood is a time of opportunity for interventions that focus on self-regulation skills and developing prefrontal neural connections (Siegel, & Bryson, 2011). During the interviews it was evident that OTs take into account neurodevelopmental capacities of children in middle-childhood and place importance on co-regulation. The OTs stated that a child's nervous system is not fully integrated during middle-childhood. These assumptions are supported in existing literature which confirms this idea stating that a child's prefrontal neural connections –responsible for stress-regulation- are still maturing (Siegal, 2010). This finding stresses that, in middle childhood, the child's tolerance limits to stress are narrower than in adults, making it harder for them to effectively regulate without support. According to Siegal (2009) the requirement of a more mature brain (a parent, caregiver or teacher) to help develop the social, regulatory circuitry of the immature brain has

important implications for families, school communities and even residential care, for example, Child and Youth care facilities. Co-regulation, mentioned by the OTs, is therefore necessary for developing the skill of self-regulation and research about this aspect can make a noteworthy contribution towards studies exploring self-regulation in the context of middle-childhood.

The findings about children in middle childhood also highlighted that learning to be with difficult sensations rather than constantly aiming for optimal arousal through positive sensory experiences is as an area that warrants further investigation (Niemiec, et al., 2012). Developing strategies in addition to sensory ones, such as the ability to be non-judgmental and the ability to label and describe with words the internal world, can be pivotal for the effective use of mindfulness with children in middle-childhood (Schonert-Reichl & Roeser, 2016).

The OTs' unique sensory understanding of self-regulation may provide insights to those investigating self-regulation within the field of Positive Psychology. This understanding of the biology of arousal and energy in relation to mindfulness may also be valuable and relevant to the work that is being done on mindfulness within Positive Psychology. In addition to this, the OTs offered pragmatic approaches to using mindfulness as a self-regulation strategy. Such insights may potentially enhance the application of mindfulness-based interventions with children in middle-childhood. However, a more comprehensive understanding of the psychological components of self-regulation and mindfulness can be called for within Occupational Therapy literature. OT, like Positive Psychology has always promoted a truly interdisciplinary approach by integrating knowledge and harnessing ideas generated within related disciplines (Stew, 2011). The hope of this study is for cross—pollination to occur between two fields with shared commonalities that aim to promote health and well-being among individuals and communities.

That said, what it is important to bear in mind is that there is no blueprint for learning mindfulness (attention and compassion) (Germer et al., 2016). Back in 1996, an influential Occupational Therapist, Eleanor Clarke Slagle stated in a lecture "Artistry involves the

orchestration of broad strategies for grappling effectively with the uncertainties inherent in clinical practice”(Nelson,1997, p. 6). Integrating Positive Psychology frameworks, specifically mindfulness, into the profession of Occupational Therapy’s own pre-existing frameworks and those now emerging is what makes therapeutic practice a craft more than anything else.

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SECTION 4: ADDENDA

ADDENDUM A: Advertisement

ADDENDUM B: Informed Consent Form

ADDENDUM C: Demographical Questionnaire

ADDENDUM D: Interview Schedule

ADDENDUM E: Extract of Data Analysis

ADDENDUM A: ADVERT**ATTENTION PAEDIATRIC OCCUPATIONAL
THERAPISTS!****ARE YOU WILLING TO BE A PART OF A QUALITATIVE STUDY EXPLORING
MINDFULNESS AS A SELF-REGULATION STRATEGY
IN MIDDLE CHILDHOOD?**

Would you be willing to participate in a semi-structured interview for one day that will take only 50 minutes?

You will have an opportunity to contribute toward scientific knowledge, i.e. research about OTs' use of mindfulness as a self-regulation strategy would imply worthy results for their professions, as well as clients (i.e. children in middle childhood) as well as future interventions. Added this, reflecting on the topic under study, your thoughts may be stimulated which can, in turn, feed back into your therapy, potentially benefiting it.

**PLEASE NOTE: To participate that you
must fit the following criteria:**

- Be registered Occupational Therapist with the Health Professions Council of South Africa (HPCSA)
- Be able to understand and be able to communicate in English.
- Have at least 3 years of experience working within paediatrics, specifically within the middle childhood age band (ages 6-11 years).
- Work and reside in the Western province (Cape Town)

CONTACT: Cailyn Sonderup @ cailynsonderup@gmail.com / 083 072 93 59

ADDENDUM B: INFORMED CONSENT FORM

PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM FOR INDIVIDUAL
INTERVIEWS

TITLE OF THE RESEARCH PROJECT: Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

REFERENCE NUMBERS:

PRINCIPAL INVESTIGATOR: Cailyn Sonderup

ADDRESS: 1 Rhodes Manor, Philips Road, Rondebosch, Cape Town, Western Cape.

CONTACT NUMBER: 082 072 9359

You are being invited to take part in a research project that forms part of my Masters degree in Positive Psychology. Please take some time to read the information presented here, which will explain the details of this project. Please ask the researcher any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU) and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki and the ethical guidelines of the National Health Research Ethics Council. It might be necessary for

the research ethics committee members or relevant authorities to inspect the research records.

➤ What is this research study all about?

This study will be conducted in the Western Cape Peninsula and will involve semi-structured interviews and a short demographic questionnaire with at least 10 participants in this study until data saturation is obtained.

➤ *The objectives of this research are:*

- i) To explore and describe OTs knowledge and use of self-regulation in middle childhood.
- ii) To explore and describe OTs knowledge and use of mindfulness as a self-regulation strategy.
- iii) To explore and describe how OTs apply mindfulness as a self-regulation strategy for children in middle childhood.

➤ Why have you been invited to participate?

You have been invited to participate because you are an Occupational Therapist specializing in the field of middle childhood, focusing on children's occupational performance toward improved wellbeing; and, practicing in the Western Cape Province.

You have also complied with the following inclusion criteria

1. Education and Occupation: Registered Occupational Therapist with the Health Professions Council of South Africa (HPCSA)
2. Language or communication: Participants should understand and be able to communicate in English.
3. Skills Required: At least 3 years of experience working within paediatrics, specifically within the middle childhood age band (ages 6-11 years).
4. An interest and basic knowledge of mindfulness and how it can potentially be used in therapy with children during middle childhood.
5. OTs, both male and female, who are working and residing in the Western province (Cape Peninsula)

➤ What will your responsibilities be?

You will be expected to participate in semi-structured interviews for one day that will take 50 minutes.

➤ Will you benefit from taking part in this research?

There are no direct benefits for participants of this study, although participation might hold the following potential indirect benefits, namely, you will have an opportunity to contribute toward scientific knowledge, i.e. research about OTs' use of mindfulness as a self-regulation strategy would imply worthy results for their professions, as well as clients (i.e. children in middle childhood) as well as future interventions. Added this, reflecting on the topic under study, your thoughts may be stimulated which can, in turn, feed back into your therapy, potentially benefiting it.

- Are there risks involved in your taking part in this research?

There is a possibility that you could experience some negative emotions as you reflect, think about and talk about your (negative) experiences with children clients. Therefore, there will be provision of information about the planned research, giving the details of purpose of the planned study, interview questions to be expected as well as information about the time and venue where the data collection will take place. The researcher will include an incident report describing a clear process to be followed if there is an incident. The monitoring of the research is strictly done according to HREC guidelines and the progress will be monitored by the study leader as well as co-study leader, regular progress reports, and HREC monitoring. If needed, amendments will be done only after consulting with the study leader as well as the co-study leader, and a letter of approval from the HREC.

- What will happen in the unlikely event of some form of discomfort occurring as a direct result of your taking part in this research study?

In the unlikely event that you experience intense negative emotions and feel the need for further discussions after the interview, you will have an opportunity to see an external counsellor.

- Who will have access to the data?

Anonymity will be protected by leaving out all identifying data of the study. Confidentiality will be ensured by omitting all identifying data out of published data, keeping research records, recordings and notes in a lock up cabinet. Reporting of findings will be anonymous and only the will have access to the collected data. Data will be kept safe and secure by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password protected. (As soon as data has been transcribed it will be deleted from the recorders.) Data will be stored for 5 years at the North-West University (Wellington office), and then it will be destroyed by an appointed person.

- What will happen with the data/samples?

This is a once-off data collection and data will be stored on a CD and in a lock up safe.

- Will you be paid to take part in this study and are there any costs involved?

You will receive no payment for participation; whilst participation will also not incur direct costs to them as the researcher will travel and meet with participants at your place of work. You will be given a small token of appreciation at the end of the interview.

- Is there anything else that you should know or do?

You can contact Cailyn Sonderup (0820729359) if you have any further queries or encounter any problems.

You can contact the Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 2089; carolien.vanzyl@nwu.ac.za if you have any concerns or complaints that have not been adequately addressed by the researcher.

You will receive a copy of this information and consent form for your own records.

- How will you know about the findings?

The findings of the research will be shared with you by email.

DECLARATION BY PARTICIPANT

By signing below, I agree to take part in a research study titled: Exploring paediatric occupational therapists' knowledge and use of mindfulness as a self-regulation strategy for children in middle childhood

I declare that:

- I have read this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions to both the person obtaining consent, as well as the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) on (*date*) 20....

.....
Signature of participant

.....
Signature of witness

DECLARATION BY PERSON OBTAINING CONSENT

I (*name*) declare that:

- I explained the information in this document to
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use a interpreter.

Signed at (*place*) on (*date*) 20....

.....
Signature of person obtaining consent

.....
Signature of witness

DECLARATION BY RESEARCHER

I (*name*) declare that:

- I explained the information in this document to
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/did not use a interpreter.

Signed at (*place*) on (*date*) 20....

.....
Signature of researcher

.....
Signature of witness

ADDENDUM C: DEMOGRAPHIC QUESTIONNAIRE



Please complete the demographical questionnaire and answer all the questions.

Mark with x where applicable.

DEMOGRAPHIC QUESTIONNAIRE

2. Age		
Please indicate your age	18-30 years	
	31-40 years	
	40-50 years	
	50+ years	
4. Race		
Please indicate your race	African	
	Coloured	
	Indian	
	White	
	Other: Please specify	
5. Children / Dependents		
Please indicate if you have children and if so, their age range.	No children	
	0-10	

	11-20	
	21-30	
	31 +	
4. Qualifications		
Please indicate your highest qualification	PhD	
	Masters	
	Hons / Post grad diploma	
	B degree	
7. Job level		
Please indicate job level		
8. Work context		
Please indicate the type of work setting you practice within	NGO	
	Private	
	Government	
	Other: Please specify	
9. Years of experience as paediatric OT		
Please indicate years of experience as Paediatric OT	3 – 5 years	
	6 – 10 years	
	10 and more	

ADDENDUM D: INTERVIEW GUIDE

INTERVIEW SCHEDULE: Cailyn Sonderup



Semi-structured questions (Individual interviews)

1. In your practice as an occupational therapist, please tell me about your knowledge and use of self-regulation strategies in middle childhood.

The following sub-questions can be used to probe if needed:

- 1.1 What type of self-regulation behaviour(s) should be expected of children within middle - childhood at both school and home?
1. 2 What underlying skills are necessary for self-regulation to be possible?
1. 3 What therapeutic practices and tools do you apply to cultivate self-regulation that work best?

2. Please tell me about your knowledge and personal and professional use of mindfulness as a self-regulation strategy.

The following sub-questions can be used to probe if necessary:

- 2.1 In what ways do you see mindfulness as being beneficial in promoting self-regulation?
2. 2 Please give me an example of a typical mindfulness tool/activity that is used to promote the practice of self-regulation in therapy?

3. Please tell me how you apply mindfulness as a self-regulation strategy for children in middle childhood.

The following sub-question can be used to probe if needed:

- 3.1 What type of children in middle childhood, in your opinion benefit most or would benefit from mindfulness; which children have/would have difficulty with adopting mindful practices?

ADDENDUM E: EXTRACT OF DATA ANALYSIS

P4 – Data analysis

1. Self- Regulation:

1.1 Environment

e.g. Autism: Regulate the environment.....change as to the environment

I think for me it's more about getting people to understand. So we need to know what is child is experiencing and how we can adapt the environment accordingly

1.2 “Body budget” + “allow for that”

“Yes... one is able to actively self-regulate, if you are aware that your body needs something in that moment, then how can you allow for that”.

- But then speaking about mindfulness and if you are mindful of the fact that you need to self-regulate will that your body needs something more than that is something that you can actively do.
- E.g. being mindful/aware what the body needs, e.g. food if you are hungry.
- Mindfulness and awareness = mindfulness is a deeper level of awareness.
- SR strategy: NB = But I think it's the knowledge of "what do I do now" that is lacking.

1.3 “Strategy = bring the child to “awareness”....e.g. use language and insight as to past experience

“...it includes stepping back, pausing doing different (past experience) breathing techniques, people do yoga, I mean all those kind of things.”

2. Mindfulness

2.1 Mindfulness for me is about being in the moment and being aware of what you were doing. For me, it is being aware of yourself, the task that you're engaged in and the people that are around you. Yeah, and being aware of all the factors that can affect what you are doing like being = = being attentive

- “...how it may affect what I'm doing”.
- Body budget + “allow for that”

3. Middle childhood

- Middle childhood: SR and mindfulness = for all children....special strategies for children with disabilities
- Difficulties as to SR = possible via mindfulness (strategies) in a very concrete manner/ways....level of disability will determine the nature of the strategy

- e.g. psychical and/or intellectual disabilities...and even then promote the child's autonomy...he/she can choose to play with blocks or....
“...just be exploring what the correct tool is for each child. I guess it also depends on the maturity of the child”

P 5 – data analysis

SR (Self-regulation) = Contributing factors as to SR = time, space, relationships, culture and that real respective the child needs are all contributing factors self-regulation...

- SR will be compromised: “...if there are impairments or lack of strategies regarding sensory processing and other intellectual stuff and how they would cope with doing things...”
- “.... [children] who have communication problems. They do not verbally communicate and some of them have physical disabilities where they can't even use hand signals to communicate their needs. They have their way of self-regulating whether it is like sucking their finger or kicking the table or kicking or going into extensor tone pattern. These kids can't communicate but they do need some change to the environment and this adds a whole another level of complexity to self-regulation.
- Add psychological factor = “I also think autonomy is really important”...give them choices
(e.g. want to play with blocks)

“These kids can choose what they gonna do, where they're gonna go, they can't use a lot of things in their lives so to give them that choice is really important and I really important part of their development.”

- Difficulties: Children with severe disabilities; physical environment = critical factor for SR

“...the kids we work with have multiple disabilities”

“So what I'm saying is that you can't self-regulate if you're not mindful... You need to be aware of yourself when was going on.”

SR and middle childhood:

“...you know they still quite egocentric at that age so for me it would be a better time to tap into you are my, what do I want, and how does that affect other people. How can I set up my personal environment...”

SR strategies

P. 7 – Data Analysis

Zoning out: P7: I think it still very important to teach them when am I zoning out? To be mindful of that and that it is fine! It's just knowing how to bring yourself back. Self regulation for me is very individual. side you prefer working individually with kids. However, once you have put foundational principles in place then maybe group sessions are possible. e.g. Teenagers that with a lot of uncomfortable and difficult emotions, hormonally emotions. **they often don't like being in their body in their body feels extremely foreign to them because of all the change that they are going through -they very self-conscious their body**. Where is the younger child is the opposite, you always have to bring them into consciousness of the body. Where is the teenagers over conscious. So make it relevant for them and put it in a positive frame.

P7: yes, so I use biofeedback history taking other assessment reports to get a whole understanding of what the nervous system

P7: I think it is lovely that you are doing this. nobody actually teaches you what the mind is doing and what the actual physiology is doing inside and I think that is where and I think that the whole thing about biofeedback is that it's a measurement and it is able to dictate back to you what your body is doing. so often we look at the behaviour where kids are jumping up and down and looking edgy, and thinking that maybe we said the wrong thing and me when it's not. But it gives you an idea of what is happening on the inside of the body.

P7: For me self regulation is the ability to shift (Theme 3). for most of my clients, it's out of a stuckness... or out of a specific pattern of nervous system firing.

SR: I think for me, self-regulation is the ability to notice where I am at (Theme 2). For me as an occupational therapist the **arousal model makes sense. Arousal is to me what the nervous system is doing. So where am I in terms of arousal and consciousness? And then, how do I regulate? so how do I up regulate for down regulate?**

- Mindfulness & SR: “awareness...”
- Mindfulness and strategies: Concrete skills - Breathing techniques; sensory experiences ((non treathening)

“That is often where mindfulness can be scary for them because you are asking them to be pretty aware of what is happening... and all of a sudden I'm having to look at what arises in my thoughts”. (strategy)

SR = biofeedback (arousal and then conscious awareness)...so how do I regulate “down for up”

SR = physiology measurements in terms of, respiration, heart rate, skin conductance = measuring the sympathetic nervous system