



Developing mindful leaders: A scoping review of the role of mindfulness in leadership development

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COMMENTS

Note to the reader:

The editorial style of this minor dissertation follows the format prescribed by the Optentia Research Focus unit of the North-West University (Vaal Triangle Campus).

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This minor dissertation is submitted in the form of a research article.

DECLARATION

I, Ian Charles Magill, hereby declare that “Developing mindful leaders: A scoping review of the role of mindfulness in leadership development” is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete in-text references and reference lists.

I further declare that this work will not be submitted to any other academic institutions for qualification purposes.

IAN CHARLES MAGILL

November 2019

DECLARATION OF LANGUAGE EDITING

I hereby declare that I was responsible for the editing of the minor dissertation:
Developing mindful leaders: A scoping review of the role of mindfulness in leadership development, submitted by **Ian Charles Magill**.

Robyn Jansen van Vuuren

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ABSTRACT

Title: Developing mindful leaders: A scoping review of the role of mindfulness in leadership development.

Background and objective: Today, in our VUCA world (Volatility, Uncertainty, Complexity, and Ambiguity) there is a need for excellent leadership. However, current leadership development theories and methods often prove to be inadequate in meeting the challenges of the present age. While mindfulness is hypothesised to be efficacious in leadership development, the literature that describes mindfulness in this context is diverse, spanning multi-disciplinary science and a variety of spiritual/religious systems as well as popular psychology books and magazines. The objective of this study was to review and scope the published literature to gain clarity of the mechanisms and themes of mindfulness pertaining to leadership development while identifying evidence gaps and offering recommendations for future research.

Methods: A scoping review methodology was deemed to be well-suited to this study due to the diverse and complex nature of the literature pertaining to this topic. Five electronic databases were searched. Articles were included if they were written in English and published after the year 2000 and represented non-parochial, secular descriptions of mindfulness in the context of leadership development.

Results: The database search was focussed on five databases: Science Direct, Pub Med, Psycinfo, American Mindfulness Research Association (AMRA) and Sabinet. Through various levels of abstraction 36 articles were included in the study. The scoping review methodology and thematic analysis noted that 36% of the articles represented qualitative findings, 33% quantitative, 11% mixed method and 19% expert opinions. Furthermore, 47% of the articles were published within a three-year period (2016-2018) and 83% of them originated in USA and Europe depicting a Western viewpoint. Various forms of leadership and the commensurate mechanisms of mindfulness were exposed, including seven themes: (1) self-regulation, (2) non-attachment and non-judgement, (3) present-moment awareness and acceptance, (4) self-awareness, (5) emotional intelligence, (6) metacognition, and (7) experiential practice-embodiment. These themes elucidated the scope of the role of mindfulness in leadership development.

Conclusions: The study concluded that mindfulness practice has the potential to contribute significantly to enhanced leadership capabilities. It further highlighted the mechanisms that demonstrated this efficacy as well as the depiction of the value of mindfulness as a secular adjunct to leadership development.

Keywords: Mindfulness, Leadership development, Leadership competencies, Scoping review.

List of contents

COMMENTS.....	1
DECLARATION	2
DECLARATION OF LANGUAGE EDITING	3
ACKNOWLEDGEMENTS	4
ABSTRACT	5
List of Figures.....	10
Chapter 1	
Introduction, Problem Statement and Methods	11
1. Introduction	11
2. Literature Review	12
2.1 Mindfulness.....	12
2.1.1 History.....	13
2.2 The challenges of leadership development	14
2.3 Mindfulness and leadership development.....	15
3. Problem statement.....	16
3.1 Rationale for the study	17
3.1.1 Research questions.....	18
3.1.2 Search objective.....	18
4. Research methodology	19
4.1 Scoping review	19

4.2	Sampling.....	19
4.3	Keywords.....	20
4.4	Data collection	20
4.5	Thematic analysis	21
4.5.1	Familiarisation with data	21
4.5.2	Generating initial codes	21
4.5.3	Searching for themes	21
4.5.4	Reviewing themes.....	21
4.5.5	Defining and naming themes	22
4.5.6	Producing the report.....	22
5.	Ethical considerations	22
6.	Chapter Division.....	23
6.1	Chapter Summary.....	23
7.	References.....	24

Chapter 2

Research Article 29

ABSTRACT 29

1.	Introduction	31
2.	Methodology: Scoping review	33
2.1	Identifying the research questions.....	34
2.2	Identifying relevant studies from various sources.....	35
2.3	Study selection involving inclusion and exclusion criteria	37

2.4	Charting of the data	40
3.	Thematic Analysis – Core themes.....	41
3.1	Self-Regulation.....	41
3.2	Present-moment awareness and acceptance	43
3.3	Metacognition	45
3.4	Self-Awareness	47
3.5	Emotional Intelligence	48
3.6	Non-attachment and Non-judgement.....	49
3.7	Experiential practice - Embodiment	50
3.8	Meta-themes of mindfulness and leadership development in the current age.	52
4.	Discussion	55
5.	References.....	62
Chapter 3	70	
	Limitations, Recommendations and Conclusion.....	70
1.	Summary of the study	70
2.	Limitations of the study	71
3.	Recommendations for future studies	73
4.	Conclusions	74
5.	References.....	76
	Appendix: Data Charting Table	0

LIST OF FIGURES

Chapter 2

Figure 1	American Mindfulness Research Association (AMRA) report on the increase of mindfulness research 37
Figure 2	Flow Chart.....39

Chapter 1

Introduction, Problem Statement and Methods

The purpose of this chapter is to orientate the reader to the study on which the minor-dissertation is based. The main aim of the study was to summarise and synthesise the literature which elucidates mindfulness playing a role or being associated with leadership development. Firstly, an introduction is offered to establish the purpose and context of the study and this is followed by a literature review which serves to define and clarify some of the key constructs of this endeavour. Then a problem statement and rationale for the study are identified, followed by a description of the method and the ethical considerations pertinent to the study.

1. Introduction

Today, organisations around the world are faced with diverse economic, social, ethical and geo-political problems. The globalisation of international trade has created complex markets and cross-border flows of finance, products, technology and people (Ashford & DeRue, 2012). In these circumstances, Ashford and DeRue (2012) claim that there has never been a greater need for exceptional leadership, thus stressing the imperatives of leadership to direct people in difficult times. Furthermore, Frizzell, Hoon, and Banner (2016) expose the gap between the demands of the global work environment and the deficit in leadership development. Consequently, Ashford and DeRue (2012) state that leaders who are positioned to solve these real-time problems will need to access more of their potential to develop skills that are representative of good leadership. In addition, Ashford and DeRue (2012) argue that *mindfulness* could be an effective approach in addressing the shortfall in leadership development.

However, an obstacle to this endeavour centres on the fact that the subject of mindfulness has been conceptualised and approached in very disparate ways in diverse contexts. On the one hand, mindfulness appears to be a mystical concept due to its religious and spiritual heritage and its essential nature epitomised as an internal state, accessed at an experiential level of being, which is both difficult to observe and describe (Good et al., 2016). On the other hand, mindfulness has been drawing the attention of the scientific community from a multidisciplinary perspective, with claims that mindfulness offers benefits in a variety of areas

of human functioning (i.e., attention, cognition, emotion, behaviour and physiology; Good et al., 2016). Furthermore, mindfulness is also an increasingly popular topic in pop-psychology books, glossy magazines and self-help manuals. There exists an abundance of mindfulness literature that promises inner peace, harmony and the eradication of the stresses and strains of modern life (Purser & Loy, 2013). Equally, there are critics who dismiss mindfulness as the latest fad and the puritans who label the secular variations as “McMindfulness” (Safran, 2014). In the corporate environment mindfulness has been accused of being fashionable in gaining employee engagement and commitment, as well as developing business leaders to lead the charge of capitalistic gains (Purser & Loy, 2013). As such, approaching mindfulness in the context of leadership development would require careful navigation of these varied and conflicting approaches.

To address this confusion, this study will endeavour to review and scope academic, scientific and grey literature pertaining to what mindfulness is, and *how* and *why* it does what it purports to do in the context of leadership development. Section 1 will give an overview of the study, section 2 will describe what mindfulness is and how it relates to leadership development, section 3 will describe the rationale for the study and section 4 will describe the method of this study.

2. Literature Review

2.1 Mindfulness

Brown, Ryan, and Creswell (2007, p. 212) propose a practical definition of mindfulness as a “receptive attention to and awareness of present events and experience”. Kabat-Zinn’s (1994) definition of mindfulness adds that the attention should be held *non-judgmentally*. Further simplification by Kabat-Zinn (Mindful Staff, 2017) states that mindfulness is about knowing what is on your mind. Good et al. (2016) note that the related states of “attention” and “awareness” are imperative to understanding mindfulness. Dreyfuss (2011) highlights that *attention* by itself may be focused, but only when coupled with the *meta-awareness* of the observer-perspective that monitors the focused attentiveness, does it become mindful. Jon Kabat-Zinn has noted (Williams & Kabat-Zinn, 2011) that mindfulness can be used as an umbrella term for a variety of practices included in Mindfulness-Based Interventions (MBI’s) such as Mindfulness Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy

(MBCT) which use techniques such as breath awareness meditation, body scanning and walking meditation to promote the felt sense of mindfulness. The benefits of these practices are facilitated through sustained experiential engagement and, as such, no theoretical or conceptual knowledge is required to access these states of awareness.

2.1.1 History

Kang and Whittingham (2010) acknowledge that mindfulness has a long-standing history and deep roots in Buddhism originating in Northern India about 2500 years ago. The word mindfulness is derived from the Buddhist word *sati*, meaning *intentness of mind, wakefulness of mind, and lucidity of mind* (Rhys Davids & Stede, 1959). The Buddhist philosophy is derived from the teachings of Siddhartha Gautama known as “Buddha” or “The Awakened One”. The Buddha was believed to have become enlightened, having achieved liberation from suffering. Consequently, his teachings outline a path of *mindfulness* for others to follow to achieve this liberation too (Kang & Whittingham, 2010). Hence, Buddhism is often acknowledged as a mental training. Kornfield (2018) describes Buddhism as a *Science of Mind*; while Brown et al. (2007) refer to *Buddhist Psychology*, highlighting the theoretical and conceptual relationship with a variety of philosophical and psychological systems, including ancient Greek philosophy, phenomenology, existentialism, and naturalism in later Western European thought; and transcendentalism and humanism in America. Further, Brown et al. (2007) note that mindfulness is a common term in these traditions as it refers to a principal component of human experience, (i.e., the activities of consciousness: attention and awareness). In a contemporary context, Williams and Kabat-Zinn (2011), Kornfield (2018), and Brown et al. (2007) promote the secularization of mindfulness, describing this endeavor as the convergence of two significant epistemologies, that of science and that of the contemplative disciplines. Furthermore, Williams and Kabat-Zinn (2011) and Glomb, Duffy, Bono, and Yang (2011) argue that the deep core of Buddhist meditation practice and the resultant benefits that cultivate clarity of thought, emotional balance (equanimity) and compassion are universal and therefore available to all people. Hence, Williams and Kabat-Zinn (2011), Kornfield (2018), and Brown et al. (2007) promote the view that mindfulness should be introduced into mainstream secular settings in the service of helping to reduce suffering and the commensurate mind-states and behaviours that exacerbate it. This should be done in a manner that neither ignores nor marginalises the highly sophisticated epistemological framework within which it is housed, but

rather makes use of that framework in non-parochial ways consistent with its core. Today, Jon Kabat-Zinn is regarded as a pioneer of the integration of mindfulness into mainstream science. Whereas initially the interest and activity surrounding mindfulness was confined to behavioural medicine, nowadays that interest has spread into clinical and health psychology, cognitive therapy, and neuroscience (Lutz, Jha, Dunne, & Saron, 2015; Mohapel, 2017). Furthermore, there is also “growing interest in the secular applications of mindfulness in primary and secondary education, higher education, the law, business, and leadership” (Williams & Kabat-Zinn, 2011, p. 3).

2.2 The challenges of leadership development

We live in an era of intense political and economic competition and fast-paced systemic changes and consequently the world of work increasingly requires more from leaders who are generally ill-equipped to meet these demands (Baron & Cayer, 2011). Frizzell et al. (2016) state that the conventional methods of developing leaders are defunct due to the lack of attention to the *interior states* from which leaders lead. Today’s requirements demand that leaders be *psychologically* and *emotionally* mature as well as have the requisite technical knowledge and skills that are commensurate with their working environment (Ruderman, Clerkin, & Connolly, 2014). Today’s organisations need leaders who in challenging circumstances can be *equanimous* and embody an integrated approach to calm the workforce and bring focus, clarity and creativity into their decision-making processes (Lucas, 2015). Bennis (2009) acknowledges that becoming a leader is aligned with becoming an integrated human being. Thus, as argued by Day, Harrison, and Halpin (2012), it follows that any meaningful theory of leadership development must be grounded in adult development theory. Ultimately, as noted by Bird, Mendenhall, Stevens, and Oddou (2010) the core features of leadership development pivot around the development of three broad areas of human functioning (i.e., perception management, relationship management, and self-management). All these domains are identified as key focus areas where mindfulness offers benefits. Correlated with this premise, Goleman (2015) identifies mindfulness as a skill required in developing *emotional intelligence* which is fundamental to leadership development, and Mohapel (2017) postulates that mindfulness enhances *self-regulation*, which is likewise a key component in leadership development. Both *emotional intelligence* and *self-regulation* are core ingredients contributing to perception management, self-management, and relationship management.

2.3 Mindfulness and leadership development

Mindfulness has been associated with numerous benefits to human functioning in the areas of attention, cognition, emotions, behaviour and physiology which in turn offer contributions to workplace functioning by improving performance, relationships and workplace well-being (Good et al., 2016). Glomb et al. (2011) note that mindfulness can assist in mitigating the stressful and challenging dimensions of the workplace through two core mental processes and one neurobiological one, namely: (1) non-attachment of the self (ego) to events, experiences, thoughts and emotions; (2) a decrease in automaticity in which unconscious patterns restrict thinking; and (3) self-regulation and increased awareness of physiological systems. Furthermore, Glomb et al. (2011) note that these primary benefits of mindfulness flow into secondary processes which impact on leadership capabilities in the form of: (a) decreased rumination, (b) enhanced empathy, (c) increased response flexibility, (d) improved affective regulation, (e) increased self-determination and greater persistence, (f) enhanced working memory, and (g) increased accuracy in affective forecasting.

Mohapel (2017) elucidates *self-regulation* as the key *mechanism* of mindfulness which offers an understanding of how mindfulness contributes to leadership development. This can be explained via the neurobiology of *focus* and *distraction* which in turn impacts on self-regulation (attentional, affective, and physiological regulation). These mechanisms are correlated with the phenomenology of the brain and the large-scale functional networks, namely the Central Executive Network (CEN), the Default Mode Network (DMN) and the Salience Network (SN; Lutz et al., 2015). The CEN is responsible for selection, planning, and decision making of goal-oriented behaviour, as well as for maintaining and manipulating information in working memory (Miller & Cohen, 2001). The functional role of the CEN underpins the capacity to select, orient, and focus an object in the mind (Lutz et al., 2015). The DMN was initially identified during passive, uncontrolled tasks and hence described as the brain's default setting (Gusnard & Raichle, 2001). The functioning of the DMN has been correlated to participants' spontaneous thoughts, mind-wandering and absent-mindedness (Fox, Spreng, Ellamil, Andrews-Hanna, & Christoff, 2015). Further to this, Seeley et al. (2007) identify the critical role that the SN plays as the *neural switch* in detecting and orienting the individual toward salient external or internal events, thus switching from the default mode to the attentive mode. More

simply, this is described as the brain's ability to stop mind-wandering (DMN) and to focus attention (CEN). Bonnelle et al. (2012) offer the hypothesis that the dynamic shifts between the three large scale brain networks are regulated through the SN, thus highlighting that efficient, engaged and focused human functioning involves the coordinated activity of these networks. What is significant to the workplace environment as Brewer et al. (2011) claim, is that mindfulness practice alters the functioning of the DMN which is responsible for mind-wandering, a prominent feature which encompasses 50% of our waking life (Brewer et al., 2011). Glomb et al. (2011) concur with the hypothesis that mindfulness improves self-regulation of thought, behaviour and physiological reactions. Hence, Glomb et al. (2011) state that the evidence derived from Neuroscience offers significant understanding to mindfulness-related changes in the brain's activities and structures that relate to heightened awareness, positive mental experiences, and attentional, affective, and physiological regulation. Mohapel (2017) links mindfulness to self-regulation and correlates this with enhanced leadership capabilities in his description of the leader's salience network switching from the distracted mind (DMN) to the focussed mind (CEN). Thus, the capacity to maintain a focussed and engaged presence enables a leader to demonstrate greater flexibility, foresight, regulation and creativity (Mohapel, 2017).

3. Problem statement

Compared to what we could be, we are only half awake – William James

In organisations today in the current VUCA age (volatility, uncertainty, complexity and ambiguity), there is a recognised need for effective leadership (Baron & Cayer, 2011). However, most current methods of leadership development are often deemed inadequate to meet these needs as they are derived from educational training programs that fail to address the internal states of being from which people lead (Baron & Cayer, 2011). Therefore, it is crucial that we adopt new methods of leadership development that also develop skills that address the challenges of coping with volatility, uncertainty, complexity and ambiguity and that are evidence-based, clear, and accessible to future leaders.

Mindfulness could be this efficacious approach to leadership development. A Harvard Business Review article (Reitz & Chaskalson, 2016) raised the question: Does mindfulness training develop leaders? The answer was yes and no: yes, because the study suggests that mindfulness training produces an improvement in three capacities that are key for leadership in today's world: resilience, collaboration, and the ability to lead in complex conditions; and no, because development depends on the level of mindfulness practice that the leader engages in (Reitz & Chaskalson, 2016). Rauzi (2013) states that practicing mindfulness is like upgrading human abilities and hence requires volitional energy and engagement to develop these skills. Kabat-Zinn (1994) likens this to building a muscle. As the participant practices and engages the muscle, so too does the muscle develop strength, flexibility and endurance. However, despite claims such as these, the scientific research in this field is comparatively minimal and fragmented. Furthermore, the literature pertaining to mindfulness is diverse and complex as it spans multiple scientific disciplines, world views, cultural and religious/spiritual practices. This is exacerbated by the proliferation of mindfulness literature in pop-psychology books and glossy magazines. Williams and Kabat-Zinn (2011) note that this complexity appears to be incongruous with the implied simplicity of mindfulness as it pertains to a practical core feature of human experience (i.e., the activities of consciousness: attention and awareness). Furthermore, Kang and Whittingham (2010) propose that mindfulness be viewed with a secular approach and contextualised as mental training and thus integrated into the discipline of psychology with a broad psychological (secular) application to leadership development. As Booth (2017) states, saying that *mindfulness* is *Buddhist* is akin to saying that *gravity* is *English* because it was discovered by Sir Isaac Newton.

Also, in the current world of fast-paced change and instant-gratification where mindfulness can be misconstrued as the “Holy Grail” of human capital development, we need to obtain an empirically informed realistic understanding and contextualisation of mindfulness and its role in leadership development. However, such a comprehensive, integrated review of scholarly and other literature on the topic appears to be lacking at present.

3.1 Rationale for the study

As noted previously, the literature pertaining to the benefits of mindfulness is diverse and fragmented and derived from numerous sources and disciplines. This creates complexity and

hinders the secularisation and accessibility of a practice that is in essence very simple and universal. Mindfulness is argued to be a core skill that is fundamental to all human beings in optimising our humanity (Williams & Kabat- Zinn, 2011). Furthermore, as our organisations and our society require leaders who can embody and self-actualise the full spectrum of human capacities to enhance their effectiveness in this VUCA age (Ashford & DeRue, 2012), there exists an opportunity for mindfulness to play a role in the development of leadership capability. However, there exists a need to interpret, clarify and integrate the literature pertaining to mindfulness to be able to obtain a synthesised picture of mindfulness in the context of leadership development.

In response to the gaps outlined above, the aim of this study is to undertake a scoping review to obtain an integrated overview of the role and mechanisms of mindfulness in the context of leadership development. This endeavour could assist organisational consultants and policymakers in implementing mindfulness-based interventions appropriately, effectively, and correctly to achieve their leadership development objectives. In addition, gaps in existing research could be identified, which in turn could serve to guide the direction of future research on the topic.

3.1.1 Research questions

Primary research question:

(a) What is the role of mindfulness in leadership development?

Secondary research question:

(b) What are the mechanisms of mindfulness that play a role in leadership development?

3.1.2 Search objective

Main research objective:

(a) To review and scope the role of mindfulness in leadership development.

Secondary research objectives:

(b) To review and scope the mechanisms of mindfulness that play a role in leadership development.

4. Research methodology

4.1 Scoping review

As suggested in the rationale for the study, the literature pertaining to mindfulness contributing to leadership development is complex, spanning many scientific disciplines as well as being associated with various religious and spiritual practices. A scoping review is well-suited methodology in instances such as these where a need exists for clarification and integration of a broad set of existing research findings. Levac, Colquhoun, and O'Brien (2010) state that the purpose of conducting a scoping review is to provide a summary of evidence from a variety of studies including academic and grey literature to illustrate the extent and depth of a field of enquiry. This is a form of knowledge synthesis that is aimed at mapping the key concepts, types of evidence and gaps in research related to an exploratory research question. This method involves systematically searching, selecting and synthesising existing knowledge (Levac et al., 2010). In this review, PRISMA guidelines were adopted to help standardise reporting. Furthermore, Arksey and O'Malley's (2005) framework for scoping reviews is one of the most widely used methods which was adopted for this review and incorporates six stages, five of which are relevant to this study: (1) identifying the research question in order to cover the extent of the literature, (2) identifying relevant studies from various sources, (3) study selection which involves inclusion and exclusion criteria, (4) charting the data by extracting it from the included studies, (5) analysis of the data by providing a descriptive thematic analysis (Arksey & O'Malley, 2005). The sixth stage, which involves consultation with stakeholders to obtain additional understandings beyond those in the literature (Levac et al., 2010), is regarded as optional and was not followed in this study.

4.2 Sampling

The researcher searched for literature relevant to the study, published in English. This included grey literature, which can be described as research produced by organisations outside of the traditional commercial or academic publishing and distribution channels. This often allows for information to be included in a review that may have been omitted due to publication bias (Bellefontaine & Lee, 2014). These publications may include government departments and agencies, civil society, academic centers and private companies and consultants. Grey literature may include reports (annual, research, technical, project, etc.), working papers,

government documents, white papers and evaluations. The researcher implemented a search for pertinent literature published after 2000; this was due to the AMRA report depicting the time period where mindfulness research grew exponentially. Due to the varied nature of the literature on mindfulness as discussed in the rationale for the study, the researcher also made use of reference lists in scientific literature which exposed expert opinions and thought leaders in the multi-disciplinary field of mindfulness research as it pertains to leadership development.

Five electronic databases were specifically chosen to offer a broad scope of research articles and other literature that pertained to mindfulness and leadership development. These included Science Direct, Pub Med, Psychinfo, Sabinet and American Mindfulness Research Association (AMRA) and were chosen as they were databases that focussed on the field of psychology and social sciences as well as the AMRA website which specialises in mindfulness research. Books were excluded from the study due to the time constraints involved with the study.

4.3 Keywords

After experimenting with various permutations of Boolean phrases and experiencing diverse results, the researcher found that using "leader*" AND "mindful*" as the search terms produced the most effective results to implement a comprehensive and rigorous scoping review.

4.4 Data collection

Data collection in scoping reviews involves the extraction of data from the selected studies which forms part of stage four in Arksey and O'Malley's (2005) framework. In this stage, the researcher developed a data-charting form (Levac et al., 2010) to determine which data to extract, and for the purpose of an efficient scoping review, only data that explains mindfulness impacting on leadership development were mapped in the data-charting form. A quality assessment of the articles that were included in this study's scoping review was not needed, since a scoping review typically does not include a quality appraisal of studies, as in the case of systematic reviews (Levac et al., 2010). However, as the aim of this scoping review was to map

a field of study and expose evidence gaps, this study (research article) may offer an opportunity for further systematic reviews.

4.5 Thematic analysis

Selected articles were analysed through a *framework analytic approach* and *thematic analysis* to create a comprehensive thematic framework. Braun and Clarke (2006) and Alhojailan (2012) describe this as a qualitative method of data analysis which is focused on scrutinising themes and reporting patterns within the data, with the objective of assisting the researcher in analysing the data in a structured and methodical manner, thus elucidating the rich detail of the data while keeping focus on the research question. According to Braun and Clarke (2006), the thematic analysis method of analysis involves six articulated phases:

4.5.1 Familiarisation with data

This was the foundational phase of the process as it required the researcher to be fully immersed and actively engaged in the data by reading (and re-reading) the material and recording the initial ideas. Hence, it was critically important that the researcher gained a comprehensive understanding of the content and familiarity with all aspects of the data (Braun & Clarke, 2006).

4.5.2 Generating initial codes

Having set the foundation, the researcher then started to identify primary codes that depict the salient features in the data that appear to be significant and pertinent to the study. This phase was concerned with delineating the context of the study (Braun & Clarke, 2006).

4.5.3 Searching for themes

The third phase of the process involved the interpretation of the collated codes, thus relevant data extracts are sorted (combined or split) into broader themes. This process established the relationships between codes, subthemes and themes (Braun & Clarke, 2006).

4.5.4 Reviewing themes

This phase can be described as a consolidation of the data, requiring a further investigation into the coherence of the themes. Thus, the researcher had an opportunity to clarify whether to

combine, refine, separate, or discard initial themes while also creating clear distinctions between the themes (Braun & Clarke, 2006).

4.5.5 Defining and naming themes

This phase involved the implementation of another wave of abstraction, allowing the researcher to further refine and define themes from the data sets. This created an opportunity to label each theme and provide clear definitions that delineate the themes into a coherent whole (Braun & Clarke, 2006).

4.5.6 Producing the report

In the final phase, the researcher endeavoured to transform the interpretations of the analyses into a coherent document by using compelling extract examples from the selected literature that related to the themes and research question. It was imperative for the researcher that the report built a solid case that depicted the conclusions of the analysis in a way that convinced the readers of the merit and validity of the analysis in the context of the research question (Braun & Clarke, 2006).

5. Ethical considerations

As a point of departure, the research ethics guidebook offered insight into the ethical framework of a scoping review and elucidates two key features for the researcher's consideration (Institute of Education, University of London, n.d.): Firstly, how accurately and fairly was the existing research treated? Secondly, did the research under review raise ethical questions that the researcher needed to address when producing the research article?

Given the nature of this project and since no human participation was involved in this scoping review, as mentioned previously, the primary ethical consideration was limited to the way in which information was treated. To this endeavour, the researcher undertook to hold an unbiased and objective stance while critically reviewing literature, bearing in mind the importance of the findings for further research purposes. The researcher was also cognisant of reading as widely as possible so as to not limit the subject matter to certain journals, authors or points of departure which may reflect a personal bias. Furthermore, to avoid the limitations that might stem from publication biases, grey literature which met the selection criteria was

also considered for inclusion. The researcher also realised that proper reviewing is time consuming and therefore endeavoured to stay within the boundaries of the chosen scope of the literature (Yallop, 2012).

6. Chapter Division

The chapters in this minor dissertation are presented as follows:

Chapter 1: Research proposal, problem statement and method.

Chapter 2: Research article – Developing mindful leaders: A Scoping review of the role of mindfulness in leadership development

Chapter 3: Limitations, recommendations and conclusions.

6.1 Chapter Summary

The purpose of this chapter 1 was to describe the proposed study, which aimed at implementing a scoping review to determine the role or association of mindfulness in leadership development. The chapter also provided an introduction to the study, a statement of the research problem and an overview of the research methodology and the ethical considerations commensurate with the study. Chapter 1 concluded by presenting an outline of the full structure of the minor-dissertation displayed in the various chapters of the study.

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Chapter 2

Research Article

ABSTRACT

Title: Developing mindful leaders: A scoping review of the role of mindfulness in leadership development.

Background and objective: Today, in our VUCA world (Volatility, Uncertainty, Complexity, and Ambiguity) there is a need for excellent leadership. However, current leadership development theories and methods often prove to be inadequate in meeting the challenges of the present age. While mindfulness is hypothesised to be efficacious in leadership development, the literature that describes mindfulness in this context is diverse, spanning multi-disciplinary science and a variety of spiritual/religious systems as well as popular psychology books and magazines. The objective of this study was to review and scope the published literature to gain clarity of the mechanisms and themes of mindfulness pertaining to leadership development while identifying evidence gaps and offering recommendations for future research.

Methods: A scoping review methodology was deemed to be well-suited to this study due to the diverse and complex nature of the literature pertaining to this topic. Five electronic databases were searched. Articles were included if they were reported in English after year 2000 and represented non-parochial, secular descriptions of mindfulness in the context of leadership development, epitomised as experiential training incorporating meditation, mindful movement, breath and/or body awareness.

Results: The literature search was focussed on five databases: Science Direct, Pub Med, Psychinfo, American Mindfulness Research Association (AMRA) and Sabinet through various levels of abstraction, 36 articles were included in the study. The scoping review methodology reported various forms of leadership and the commensurate mechanisms of mindfulness, including seven themes: (1) self-regulation, (2) non-attachment and non-judgement, (3) present-moment awareness and acceptance, (4) self-awareness, (5) emotional intelligence, (6) metacognition and (7) experiential practice-embodiment. These themes elucidated the scope of the role of mindfulness in leadership development.

Conclusions: The study concluded that mindfulness practice contributed significantly to enhanced leadership capabilities and further highlighted the mechanisms that demonstrated this efficacy.

Keywords: Mindfulness, Leadership development, Leadership competencies, Scoping review

1. Introduction

Today, we live in the VUCA world, as organisations around the globe are confronted with complex economic, social, ethical, and geo-political problems. This is a result of the complex industrial markets and cross-border flows of finance, products, technology, and people, that are derived from the globalisation of international trade and the diminished national borders that have been penetrated by digital communication and internet business applications (Ashford & DeRue, 2012). This VUCA world creates a psychologically demanding environment in which leaders must operate.

It is in this current time that organisational systems require exceptional leadership (Ashford & DeRue, 2012), thus stressing the imperatives of leadership to direct people in times of adversity. Furthermore, there exists a gap between the requirements of the global organisational environment and the deficit in leadership capabilities (Frizzell, Hoon, & Banner, 2016). Consequently, Ashford and DeRue (2012) state that leaders who are confronted with these problems will need to access more of their resources to develop skills that epitomise good leadership. In addition, Ashford and DeRue (2012) claim that *mindfulness* training could be an efficacious method to address these real-time issues in leadership development. However, what confounds this endeavour arises from the fact that the concept of mindfulness has been conceptualised and approached in very diverse ways in many different contexts. Firstly, due to its origins, mindfulness appears to be a mystical concept derived from its religious and spiritual heritage and its essential nature epitomized as an internal state, accessed at an experiential level of being, which is both difficult to observe and describe (Good et al., 2016). Secondly, the scientific and academic community has developed an interest in mindfulness from a multidisciplinary perspective, with claims that mindfulness offers benefits in a variety of areas of human functioning (i.e., attention, cognition, emotion, behaviour and physiology; Good et al., 2016). This is compounded by the multiple applications of mindfulness that have been published in popular psychology books, magazines and self-help manuals. Prolific literature exists on mindfulness, that offers an existential release from the current VUCA age, promising liberation from suffering and a path of enlightenment and well-being. While there are the pundits of mindfulness, there exists an equal array of critics who dismiss mindfulness as a new-age trend, as well as the puritans who label the secular variations as

“McMindfulness” (Reb, Sim, Chintakananda, & Bhawe 2015; Safran, 2014). Furthermore, the critics state that mindfulness is inauthentically implemented to promote employee engagement and commitment, as well as unethically and insidiously used in developing business leaders who front the endeavours of capitalism, consumerism and corporate greed, which is diametrically opposed to the original soteriological heritage of mindfulness (Purser & Loy, 2013). In addition, various authors (Goldman Schuyler, 2010; Reitz & Chaskalson, 2016) have noted that mindfulness is not a panacea, “quick-fix”, “pick-up when you please” practice. Rather, the benefits can be likened to an exercise regime where, with sustained effort and focus, fitness and capability will develop over time (Goldman Schuyler, 2010). Also, Frizzell (2015), Kornfield (2018), and Brown, Ryan, and Creswell (2007) contextualise mindfulness as a component of the Buddhist eightfold path which represents a much larger system of psychological practices which correlates with optimal human functioning and human experience and which can be applied to leadership development.

As noted, there exist multiple dimensions of mindfulness and its application to leadership development which are spread across many domains in which the divergent interest groups approach the topic from often contrasting standpoints ranging from the perspective of religion, spirituality, behavioural science, medical science, cognitive psychology, and business science. Thus, it becomes very difficult to provide a coherent framework of the role of mindfulness in leadership development, which in turn limits the applications and value in training and development interventions. Furthermore, this lack of coherence and integration renders the identification of directions for future research very difficult as there is little clarity of which dimensions of mindfulness contribute to leadership development have been adequately researched and which have not (Ashford & DeRue, 2012).

To address this complexity, this study will endeavour to review and scope academic, scientific literature and expert opinions pertaining to what mindfulness is, and *how* and *why* it does what it purports to do in the context of leadership development. As such, this study represents a scholarly attempt to summarise and synthesise a wide variety of literature that depicts non-parochial and secular descriptions of mindfulness in this context. This endeavour could assist in offering clarity and coherence to this complex topic, which in turn may identify gaps in existing

research whilst also offering direction to future researchers, organisational consultants and policymakers.

2. Methodology: Scoping review

As suggested in the introduction, the literature pertaining to mindfulness contributing to or associated with leadership development is diverse and complex, spanning many scientific disciplines as well as being associated with various religious and spiritual practices. A scoping review is a well-suited methodology in instances such as these where a need exists for clarification and integration of a broad set of existing research findings. Levac, Colquhoun, and O'Brien (2010) state that the purpose of conducting a scoping review is an effort to provide a summary of evidence from a variety of studies including academic and grey literature, to illustrate the extent and depth of a field of enquiry. This is a form of knowledge synthesis that is aimed at mapping the key concepts, types of evidence, and gaps in research related to an exploratory research question. This method involves systematically searching, selecting and synthesising existing knowledge (Levac et al., 2010). In this scoping review, PRISMA guidelines will be adopted to help standardise reporting. Furthermore, according to Arksey and O'Malley's (2005) framework for a scoping review, which is one of the most popular methods used for scoping reviews, this method incorporates six stages of which five are relevant to this study. The sixth, optional stage, which involves consultation with stakeholders to obtain additional understandings beyond those in the literature, was not followed in this study. The first stage of this framework was identifying the research question in order to cover the extent of the literature and this ultimately predicts the scope of the study (Arksey & O'Malley, 2005). Secondly, the researcher sought to identify relevant studies from various sources, this stage involved establishing which databases will be searched (Arksey & O'Malley, 2005). The third stage incorporated the establishment of the inclusion and exclusion criteria that set the parameters of the search process (Arksey & O'Malley, 2005). In the fourth stage the researcher created a data chart (see appendix) to extract the relevant data from the selected studies in a cohesive manner (Arksey & O'Malley, 2005). The fifth stage involved the thematic analysis in which the researcher scrutinised the selected articles to extract the themes that elucidate the scope of the study in relation to the research question (Arksey & O'Malley, 2005). To facilitate the thematic analysis, Braun and Clarke's (2006) framework analytic approach was adopted which involved an articulated process of six consecutive stages. This commenced with the

researcher being immersed in the data by reading and re-reading to become familiar with the data; the researcher created a Mendeley folder which held the selected articles and scrutinised each article following a chronological sequence from oldest (2009) to most recent (2018). The second phase of the Braun and Clarke (2006) method was to generate initial codes. Hence, as the researcher read each article the salient features of the article were highlighted and documented with a primary code that was deemed significant and pertinent to the study, thus delineating the context of the study (Braun & Clarke, 2006). In the following stage the researcher interpreted the collated codes, sorting them into primary and secondary themes, thus establishing connections between themes (Braun & Clarke, 2006). The next consolidatory phase involved the researcher in a process of establishing the coherence of the themes, as such, the themes were combined, split or discarded to create clear distinctions between the themes (Braun & Clarke, 2006). The following stage of Braun and Clarke's (2006) method allowed for another wave of abstraction, hence the researcher had another opportunity further define the themes from the data-sets. Thus, some themes were clustered together as they were very closely related and for the purposes of brevity, clarity and eliminating duplication they were grouped and labelled accordingly, for example; non-attachment and non-judgement were combined to form one theme. In the final phase, the researcher sought to transform the interpretations of the analyses into a cohesive document by extracting examples of the theme which elucidated the role and mechanism of the theme, pertaining to mindfulness playing a role in leadership development. Thus, the researcher endeavoured to display the theme in the context of the research question (Braun & Clarke, 2006).

2.1 Identifying the research questions

Arksey and O'Malley (2005) note that the first phase of performing a scoping review is to accurately identify and depict the research question in order to cover the extent of the literature. This was particularly pertinent in the context of this study due to the diverse and complex nature of the literature. Mindfulness related to leadership development has grown to be a popular and controversial topic in which the literature is scattered across many domains of which the respective interest groups approach the topic from divergent viewpoints referring to mindfulness in the context of leadership development from the perspectives of religion, spirituality, psychology, medical science, neuroscience, and business/management science. Thus, it becomes very difficult to provide a coherent framework of the role of mindfulness in

leadership development, which in turn limits its potential usage and integration in training and development interventions. Furthermore, this lack of coherence and integration renders the identification of directions for future research very difficult as there is little clarity of which mechanisms of mindfulness actually contribute to leadership development and which have been adequately researched and which have not.

It is for this reason that the secondary research question demarcates the attempts of the researcher to analyse and synthesise to what extent and from what perspectives the dimensions and mechanisms of mindfulness have been documented and researched in the context of leadership development

Primary research question:

What is the role of mindfulness in leadership development?

Secondary research question:

What are the mechanisms of mindfulness that play a role in leadership development?

2.2 Identifying relevant studies from various sources

In accordance with the steps proposed by Arksey and O'Malley (2005), in March 2019, five relevant scientific databases were identified within which to identify literature that was available and which could potentially depict mindfulness playing a role in leadership development from the perspective of physiological, psychological, behavioural, emotional or cognitive functioning (Good et al., 2016). After some investigations the following databases were selected as they were deemed to be the most credible in holding articles that pertained to mindfulness and leadership while also offering sufficient volume, depth and diversity for the credibility and context of a scoping review (Levac et al., 2010). These included: The American Mindfulness Research Association (AMRA), Science Direct, Sabinet, Psychinfo, and Pubmed.

After experimenting with various permutations of Boolean phrases and experiencing diverse results, the researcher found that using "leader*" AND "mindful*" as the search terms

produced the most effective results in relation to executing a comprehensive and rigorous scoping review.

The database search focussed on extracting literature demonstrating an impact or association of mindfulness on leadership development, published in English after the year 2000. This was due to the depiction of the AMRA research on the time period where research on mindfulness increased dramatically (see Figure 1).

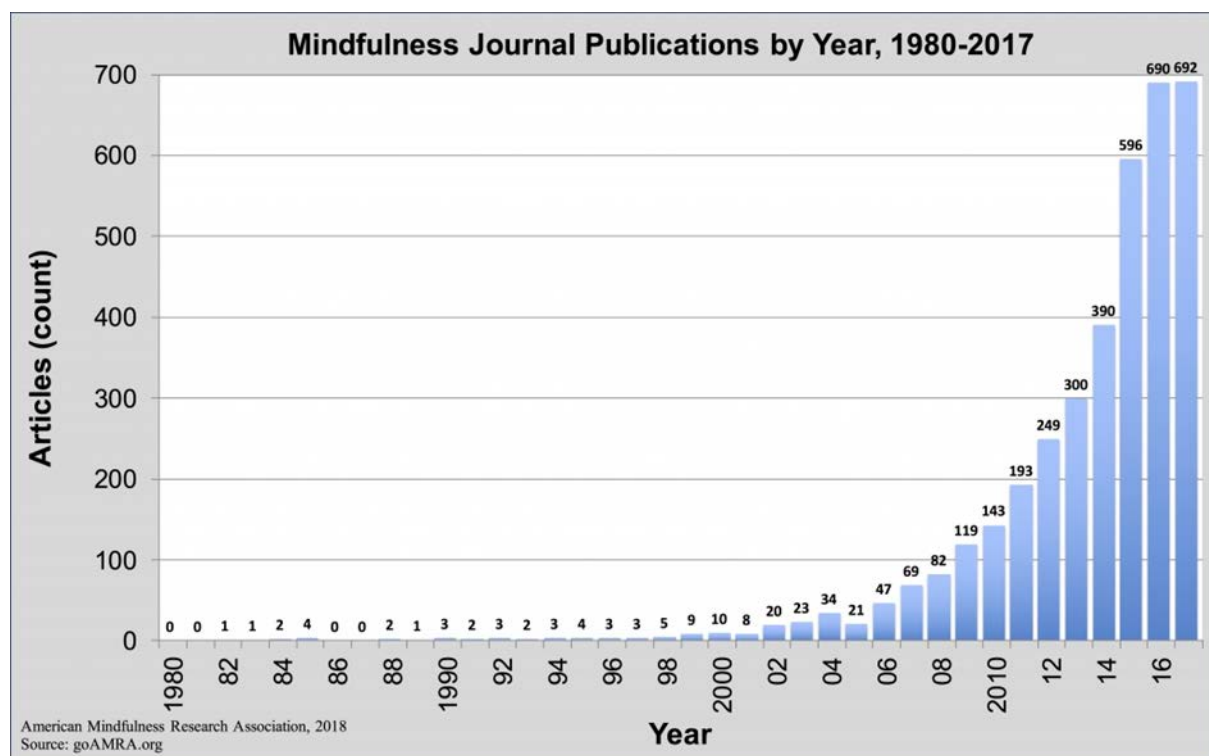


Figure 1

The database search included grey literature, described by Bellefontaine and Lee (2014) as research produced by organisations outside of the traditional commercial or academic publishing and distribution channels which often allows for information to be included in a review, which may have been omitted due to publication bias. Reference lists of relevant articles were also analysed for appropriate material to include in the scoping review. The inclusion of grey literature (Bellefontaine & Lee, 2014) and reference lists to eliminate the potential for a publication bias which may impact the study was motivated by firstly, addressing the objectives and method of conducting a scoping review which is aimed at covering a wide range of diverse literature which fully encompasses the scope of the topic and

thus adds credibility to the study (Levac et al., 2010). Secondly, due to the diverse nature of the topic of mindfulness and its application to leadership; the researcher endeavoured to access as broad range of literature, as was possible, given that much of the literature is available outside of a scientific realm.

2.3 Study selection involving inclusion and exclusion criteria

The purpose of establishing set inclusion and exclusion criteria was to set up a basic framework and parameters for the scoping review. This was achieved in conjunction with the previous stage of the process of identifying relevant studies from various sources while being cognisant and aligned to the research question (Arksey & O'Malley, 2005).

Articles were included if:

- The article reported a positive or negative impact or association of mindfulness on leadership development.
- The description of mindfulness was characterised by an experiential engagement with one or more of the following mindfulness training techniques: meditation, breath awareness, body awareness (scanning), or mindful movement.
- The articles represented either scientific or academic literature, secondary data sources, grey literature, and expert opinions.
- The articles represented a non-parochial and secular depiction of mindfulness in the context of leadership development.

Articles were excluded if:

- They were written prior to year 2000 - this is based on the AMRA report (see Figure 1), which denotes the period when mindfulness related research increased dramatically.
- They were written in a language other than English.
- They were books or book chapters; this was due to the time constraints of the study.
- They were underpinned by a description of mindfulness in a religious context which could potentially depict a religiously biased viewpoint of the role of mindfulness in human functioning.

Using the Boolean phrases as depicted previously, the database search produced the following results: The Science Direct database search produced 3041 articles, the PubMed search produced 170 articles, the Psychinfo search produced 186 articles, the AMRA search produced 34 articles and the Sabinet search produced 82 articles. The accumulative total was 3513 articles. The researcher then removed the 86 duplicates, leaving 3427 titles of which 3350 titles were excluded through an appraisal of the relevancy of the title of the article. Thus, a remaining 77 abstracts were appraised for their appropriateness to the research question and adherence to the inclusion and exclusion criteria, and consequently a further 35 abstracts were excluded. The remaining 42 full articles were then scrutinised for their relevancy and 18 articles were then excluded leaving 24 articles that were pertinent to the study on the basis of their concordance with the inclusion and exclusion criteria that were set for the study. These 24 articles produced a further 1508 titles through a search of their reference lists of which a further 12 articles were selected according to the inclusion criteria. Thus, the final number of articles that were selected on which to base the scoping review rose to 36 articles (see Figure 2 for an overview of the search results).

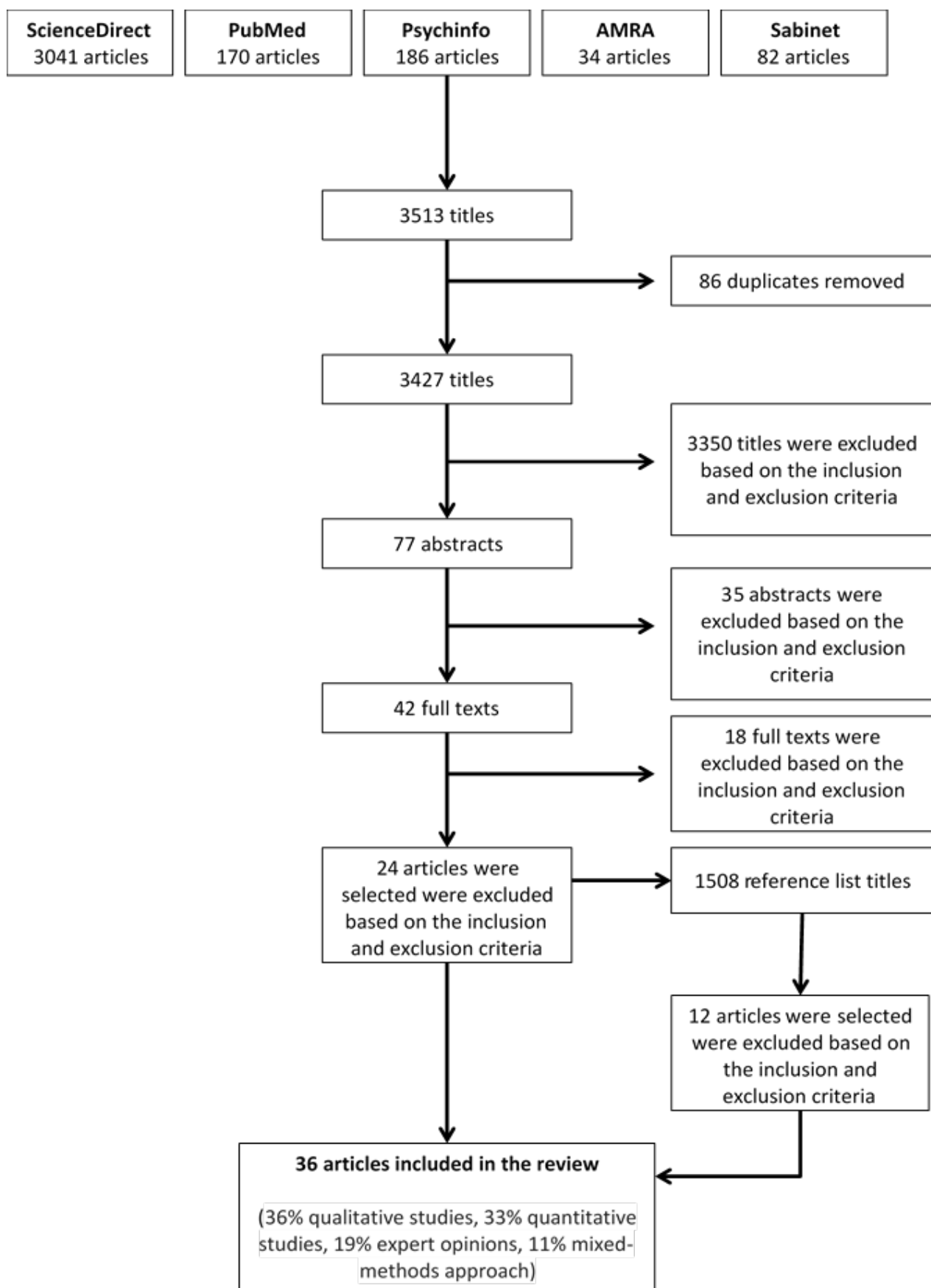


Figure 2

2.4 Charting of the data

As outlined in stage four in Arksey and O'Malley's (2005) framework, data collection in scoping reviews involves the extraction of data from the selected studies. In this stage, the researcher developed a data-charting table (see appendix), which Levac et al. (2010) state as important as it helps extract and document the variables that point to the research question, as well contextualising the data-charting process as an iterative method which requires continuous updating. For the purpose of the proposed study's scoping review, only data that explained mindfulness impacting or associated with leadership development was mapped in the data-charting diagram in the following categories: study design, country of origin, study population, the number of participants included in the study, age range, gender, the mindfulness technique or aspect which was investigated, leadership outcome measure, and results (i.e., whether mindfulness played a role or not in leadership development). The objective for selecting these categories was to obtain an overview of the contextual and methodological aspects characterising existing research, which would facilitate the identification of gaps and the outlining of recommendations for future research.

A quality assessment of the articles was not implemented as this is not a requirement of a scoping review methodology, as is the case of systematic reviews (Levac et al., 2010). Furthermore, as the aim of a scoping review is to map a field of study and expose evidence gaps, this study may offer an opportunity for further systematic reviews.

A general analysis of the 36 articles that formed the focus of the scoping review revealed that 36% were qualitative studies and 33% were quantitative in orientation. A further 19% of the articles were expert opinions, and the remaining 11% represented a mixed methods approach.

A significant portion of the articles originated from the USA (15/36), with the remainder emanating from Canada (6/36), Australia (3/36), Germany (3/36), The United Kingdom (2/36), Singapore (2/36), Austria (2/36), New Zealand (1/36), the Netherlands (1/36) and Belgium (1/36). There was no representation of studies from the African or South American continents or from East European countries. However, given the predominant non-English language contexts that prevail in these regions, this may be the result of conducting the review only on articles published in English, rather than a lack of research on the topic in these regions.

The research settings were predominately focused on leadership in the general corporate space (16/36 articles). However, there were a few studies that focused on leadership in the health-care environment (4/36), in education (3/36) and one study reported on a research project in an engineering company.

The various articles approached the concept of leadership and /or leadership development from different perspectives; describing types and forms of leadership. transformational leadership was identified in (5/36) articles, conscious leadership (2/36), authentic leadership (2/36), charismatic leadership (2/36), adaptive leadership (1/36), servant leadership (2/36), self-leadership (3/36), and a form of leadership termed abusive supervision (2/36).

3. Thematic Analysis – Core themes

In accordance with the fifth stage of Arksey and O'Malley's (2005) scoping review framework, the 36 selected articles were analysed through a *framework analytic approach* and *thematic analysis*, as proposed by Braun and Clarke (2006) and Alhojailan (2012) to create a comprehensive framework of the scope of the literature. Seven core themes were identified, which are described below.

3.1 Self-Regulation

Judging from the literature under review, self-regulation can be regarded as a core theme of mindfulness pertaining to leadership development. This was highlighted by 32/36 articles, representing 89% of the selected documents.

Mohapel (2017) and Pearlman (2015) elucidate *self-regulation* as the key *mechanism* of mindfulness which offers an understanding of how mindfulness contributes to leadership development. This can be explained via the neurobiology of *focus* and *distraction* which in turn impacts on self-regulation (attentional, affective, and physiological regulation). These mechanisms are correlated with the phenomenology of the brain and the large-scale functional networks, namely the Central Executive Network (CEN), the Default Mode Network (DMN) and the Salience Network (SN; Lutz, Jha, Dunne, & Saron, 2015). The CEN is responsible for selection, planning, and decision making of goal-oriented behaviour, as well as for maintaining and manipulating information in working memory (Miller & Cohen, 2001). The functional role of

the CEN underpins the capacity to select, orient, and focus an object in the mind (Lutz et al., 2015). The DMN was initially identified during passive, uncontrolled tasks and hence described as the brain's default setting (Gusnard & Raichle, 2001). The functioning of the DMN has been correlated to participants' spontaneous thoughts, mind-wandering and absent-mindedness (Fox, Spreng, Ellamil, Andrews-Hanna, & Christoff, 2015). Further to this explication, Seeley et al. (2007) identify the critical role that the SN plays as the *neural switch* in detecting and orienting the individual toward salient external or internal events. More simply, this is described as the brain's ability to stop mind-wandering (DMN) and to focus attention (CEN). Bonnelle et al. (2012) offer the hypothesis that the dynamic shifts between the three large scale brain networks are regulated through the SN, thus highlighting that efficient, engaged and focused human functioning involves the coordinated activity of these networks. What is significant to the workplace environment as Brewer et al. (2011) claim, is that mindfulness practice alters the functioning of the DMN which is responsible for mind-wandering which encompasses a prominent feature of approximately 50% of our waking life (Brewer et al., 2011). Glomb, Duffy, Bono, and Yang (2011) concur with the hypothesis that mindfulness improves self-regulation of thought, behaviour and physiological reactions. Hence, Glomb et al. (2011) state that the evidence derived from Neuroscience offers significant understanding to mindfulness-related changes in the brain's activities and structures that relate to heightened awareness, positive mental experiences, and attentional, affective, and physiological regulation. Mohapel (2017) links mindfulness to self-regulation and correlates this with enhanced leadership capabilities in his description of the *neural switch* from the distracted mind (DMN) to the focussed mind (CEN). The capacity to maintain a focussed and engaged presence, enables a leader to demonstrate greater flexibility, foresight, regulation and creativity (Mohapel, 2017). Kinsler (2014) concurs, promoting the value of mindfulness in the context of leadership development, describing the enhanced self-regulatory capacity that allows leaders to manage their automatic responses more efficiently, thus producing more flexibility and openness for more creative responses when solving problems. Reb et al. (2015) claim that effective leadership involves the self-regulatory component of being focused on goals and intentions and an ability to refocus as needed. This ability to maintain focus is linked to *self-efficacy*, as Reb et al. (2015) acknowledge that mindfulness practice develops an ability to hold a sustained focus on an intention, thus exercising control over one's mind and impulses - this is considered to be a significant component of effective leadership. Good et al. (2016)

offer a linkage with self-regulation facilitating resilience, which is deemed to be another important characteristic of leadership. This is described as the ability to stay centered and less reactive in the face of adversity (Good et al., 2016). Furthermore, self-regulation plays an important role when multi-tasking as Ehrlich (2017) elucidates that our brains function optimally when attention is held on one task at a time. However, in busy or difficult times a leader may try to take on too much and land up multi-tasking to reach certain goals, thus switching to and fro on a variety of tasks, putting undue pressure and stress on themselves. Mindfulness practice develops self-regulation thus providing the leader with skills to stay calm and focused in stressful times.

Another theme related to self-regulation and optimal leadership behaviour is offered by Walsh and Arnold (2018) who claim that self-regulation is important in buffering against *emotional exhaustion* and *burnout* which produces negative affect and impaired perspective-taking amongst leaders, which in turn could reduce a *transformational leadership* style to *abusive supervision*. A further correlation of mindfulness impacting on leadership behavior is offered by Frizzell et al. (2016), who highlighted the value of mindfulness and self-regulation amongst leaders in managing depression and anxiety, interpersonal conflict, work stress and dealing with the frustrations of working with bureaucratic systems. Glomb et al. (2011) state that a core component of self-regulation which is key for leadership development is the *decoupling* of the leader's egoic-mind to events, also reduced automatic thinking; and increased awareness of physical experiences. These qualities are correlated with self-leadership as Sampl, Maran, and Furtner (2017) state that *self-observation* and *goal setting* is related, as one is being mindful and displaying awareness in relation to a goal. Thus, the regulation of awareness to stay focused on a target is paramount. Lutz et al. (2015) adds that these components of mindfulness and self-leadership manifest in an individual's life as enhanced self-efficacy and goal-achievement. Furthermore, Sampl et al. (2017) acknowledge self-leadership as a self-influencing process and a learnable skill achieved through mindfulness practice and self-regulation.

3.2 Present-moment awareness and acceptance

The analysis of the selected articles revealed that present-moment awareness and acceptance are core qualities of mindfulness that impact on leadership capability. Amongst the 36 articles analysed, 26 (72%) referred to these components of mindfulness as having an impact on

leadership capability. This was described by Roche, Haar, and Luthans (2014) and Brendel and Bennett (2016) as a leader's ability to be focused in the present-moment, which couples with an attitude of *acceptance* of the present-moment as it is, without an intricate cognitive overlay of interpretation of the present-moment. This is highlighted in Brown and Ryan's (2003, p. 822) basic definition of mindfulness as "the state of being attentive to and aware of what is taking place in the present". This definition proves to be fundamental to almost all the definitions and descriptions of mindfulness. Reitz and Chaskalson (2016) refer to the ability to let the present moment be what it is and accepting it with *openness* and *curiosity*, without the churn of thoughts distorting the reality of the present moment. Wasylkiw, Holton, Azar, and Cook (2015) acknowledge this quality in the context of effective leadership as an authentic focus and engagement on the task at hand. Reb et al. (2015) and Reb, Narayanan, Chaturvedi, Sankalp (2014) claim that present-moment awareness helps leaders manage their tendency for rumination, thus enhancing their ability to nullify the related stress and anxiety. This quality of equanimity is foundational for effective leadership. On the other hand, Reb et al. (2015) note that in certain cases the consideration of the past and future could be helpful to leaders in planning for future events or acknowledging reflective learnings from the past. Therefore, Reb et al. (2015) conclude that an effective leader would need to find a balance in their positioning in the present-moment and how they relate to the past and the future.

King and Haar (2017) and Sethi (2009) highlight the quality of a leader who is *authentically present* (in-the-moment) which builds better relationships with followers and enables the leader to be more influential, this is contrasted with a leader who is distracted and disengaged, who is less influential and effective.

A leader who is *present* is also recognised as being more attuned to the needs of their followers and have a better understanding of their predicament - they are thus more aware and empathetic of their employee's situation, their needs and ambitions (Reb et al., 2015; Roche et al., 2014). The quality of *attentive listening* is also correlated with present-moment awareness and described by Bavelas, Coates, and Johnson (2000) as an important component of leadership effectiveness contrasted with the negative aspects of a distracted leader. Verdorfer (2016) refers to a leader's level of mindful acceptance as facilitating *forgiving behaviors* which assist in building better relationships with followers, whereas Pinck and Sonnentag (2018)

describe acceptance in the context of a leader's openness to face both positive and negative circumstances, which refers to an enhanced ability for *adaptive coping*, thus enabling a leader to face challenging situations with curiosity and creativity. Decuyper, Audenaert, and Decramer (2018) refer to present moment attention which allows leaders to process information more accurately which decreases decision biases and improves creativity in decision making.

3.3 Metacognition

This theme was identified in 22/36 articles (61%) and thus appears to be significant in terms of highlighting the role of mindfulness in leadership. Ward and Haase (2016) and Glomb et al. (2011) refer to metacognition as the ability to step out one's automatic engagement with thoughts and simply observe all that is going on in our internal and external world. Metacognition enables an individual to observe their thoughts, feelings, sensations and impulses from a more spacious perspective as opposed to a tightly held immersion in ruminating thoughts. It is this ability which gives a leader the opportunity to disengage their automatic pilot and get a clear view of reality (Brown & Ryan, 2003). Reitz and Chaskalson (2016) provide a metaphor which refers to moving out of the fast-flowing stream of thought and standing on the riverbank to clearly observe what is going on. Ward and Haase (2016) refers to the *Observer-self*, which is detached from the happenings of an experience, thus providing clarity of perception, insight, calmness and control of thoughts and emotions.

The diverse and expansive nature of this concept is indicated by Reb et al. (2015) who note that metacognition is often described in different ways which highlight the diverse qualities which this concept embodies, these refer to: cognitive defusion, non-reactivity, non-judgement, decentering, re-perceiving, witnessing, or simply awareness. Ultimately, these concepts all refer to qualities of the "observing self". It is within this mechanism of dis-identification where the "experience is recognized as separate from the self, thus the self and the experience are defused, hence the experience exerts less control over behavior" (p. 266).

Brown and Ryan (2003) add to these descriptions of metacognition by referring to this concept as the background *radar of consciousness* which monitors our internal world and external environment. Thus, a person may be conscious of various stimuli without any one stimulus being held at the center of attention. This enables a leader to maintain a balanced and

equanimous disposition when engaging with followers through times of adversity and times of buoyancy.

Glomb et al. (2011) outline the benefits of metacognition applied to leadership in their depiction of human functioning, which is mostly influenced by deferment to heuristic-based thought processes. However, they argue that it is mindfulness and metacognition which facilitates an individual's awareness to maintain a broad and flexible relationship with thoughts and experiences. Furthermore, this decoupling mechanism enables individuals to detach themselves from their immediate experiences, giving them a clear and objective view of their immediate challenges (Glomb et al., 2011). The benefits of metacognition which are applied to leadership are described by Reb et al. (2014) as facilitating leaders to better handle volatile situations and employees, which creates better leadership performance. Verdorfer (2016) refers to metacognition which *diminishes bias* and orientates a leader to their basic values thus achieving a higher level of leadership *authenticity*. Reb et al. (2015) highlights how metacognition reduces the ego involvement and *ego-defensiveness* of a leader, thus allowing the leader to focus on organizational goals rather than protecting their own interests. Furthermore, a leader's ability to step back and allow employees to express their ideas, concerns and feedback may improve *relationships* and *productivity*.

Conversely, Reb et al. (2015) hypothesise that leaders who embody a metacognitive capacity may be viewed as unemotional and may be less effective in gaining the support of followers as they may be perceived to be apathetic and disengaged. Similarly, Reb et al. (2015) depict the possible similarities between the behavioural aspects of witnessing awareness and the features of corporate burnout where a burnt-out individual displays reduced commitment to negative work situations to create a psychological distance to protect their *psyche* from the stresses and strains of their work context. In this regard, we would need to gauge what may be a positive and effective leadership behavior against a behavioural coping mechanism on a case for case basis. In summary, the selected literature predominately reports that a capacity for metacognitive awareness is a characteristic of good leadership as it facilitates the leader being able to hold a broad and flexible relationship with their personal thoughts and experiences, thus creating an ability to hold a more open expansive viewpoint and considering multiple options simultaneously.

3.4 Self-Awareness

The theme of self-awareness was prevalent in many of the articles that were investigated and as such represents one of the most significant aspects of mindfulness which is applied to leadership. In total, 32 of the 36 articles referred to this theme equating to 89% of the selected articles. Goleman (2015) defines self-awareness as the selective processing of information about the self, it refers to an ability to monitor our inner world, our thoughts and emotions as they arise. Furthermore, self-awareness allows us to be conscious of the conditioning and preconceptions of the mind, which can form the foundation of freeing the mind from these set thinking patterns (Goleman, 2015). Lange, Bormann, and Rowold (2018) argue that the definition of what mindfulness is implies awareness and the ability to see the self in the present moment.

In the context of leadership Pinck and Sonnentag (2018) identify the key components of self-awareness as *values, identity, emotions and motives/goals*. Ehrlich (2017) notes that the *spirit* of leadership is built around an ability of a leader to be *attentive* and *attuned* which in turn creates self-awareness, this is a core feature of mindfulness which contributes to leadership development. Ehrlich (2017) uses the metaphor of a *spotlight* to depict awareness – when we experience sensory and informational overload, the spotlight jumps around, fleetingly addressing each stimulus. With mindfulness, we can point our *spotlight* to where we want to focus our energies and intentions. Similarly, we can shift the focus of the spotlight on to ourselves to reflect on our experiences to create meaning and learning (Ehrlich, 2017). Kinsler (2014) correlates mindfulness and self-awareness in a depiction of an *authentic leader* who represents their authentic self and embodies their deep core with openness and non-judgement. Through self-awareness they can objectify how their human system works; the repetitive thoughts, emotions and sensations. This self-awareness enriches a leader's understanding and perspective of their role as a leader. Kinsler (2014) correlates *self-awareness* and *self-regulation* as core aspects of authentic leadership noting that practising mindfulness provides opportunities to enhance self-awareness and self-regulation, thus creating an awareness for a leader to choose more self-concordant goals and align to a more authentic way of being (Kinsler, 2014). Reitz and Chaskalson (2016) refers to *Curiosity* in the context of mindfulness that correlates with self-awareness and leadership development. This implies that a mindful leader is aware, open and curious of what is happening in their inner and outer

worlds. Reitz and Chaskalson (2016) claim that without *curiosity* there is no will to be self-aware in the present moment and staying with it. Similarly, Pearlman (2015) uses the term “Informed Mindfulness” which correlates mindful self-awareness and self-regulation with educated decision-making, thus the mindful leader is aware, non-judgmentally, of what is occurring in the present moment, and understands that his or her response is a choice. Pearlman (2015) advocates that in the context of leadership we need our self-awareness to be coupled with knowledge, skills, values, and wisdom, this implies that it is one thing being aware, but we need to know what to do with our awareness which is important.

King and Haar (2017) conclude that senior managers with higher self-awareness through mindfulness practice also embodied better leadership behaviours and leadership self-mastery. Linking with self-mastery, Furtner, Tutzer, and Sachse (2018) note that mindfulness builds self-awareness which contributes significantly to self-leadership which in turn facilitates the achievement of personal and work-related objectives. Thus, it follows that Frizzell et al. (2016) reported that 17 of 20 leaders in their study experienced enhanced self-awareness as a developmental result of their mindfulness practice which impacted on their leadership capabilities.

3.5 Emotional Intelligence

Another theme which was well-documented in the selected articles indicated by 29/36 (80%) prevalence in the selected articles is Emotional Intelligence (EQ) which is described by Goleman (1995) and Kinsler (2014) as the ability to identify, assess, and control one’s own emotions and monitor the emotions of others, and that of groups. Ehrlich (2017) simplifies this conceptualization by describing it as an ability to know what a person is feeling, to perceive what others are feeling, and use this information to make decisions and reach objectives. Furthermore, Ehrlich (2017) notes that emotional intelligence is not a synonym for interpersonal skills. When applying mindfulness practice to emotional intelligence it begins with an ability to manage one’s personal stress indicated by for instance recognising one’s state of emotional exhaustion and tendency to be irritable, self-centered and reactive. Ehrlich (2017) and Dhiman (2009) note that it is this mindful awareness of one’s personal state of being which enables the individual to tap into their physical and emotional interiors, thus acknowledging these feelings which in turn manifests as an ability to manage them more effectively.

Moreover, Ehrlich (2017) notes that it is emotional intelligence which enables an individual to recognise the feelings and the context of others around them. Dhiman (2009) links emotional intelligence with mindfulness stating that people are more in control of themselves and situations simply because through mindfulness they experience reality more clearly.

Ward and Haase (2016) claims that mindfulness develops emotional awareness in leaders as they develop a skill of being present-in-the-moment with their feelings and emotions and those feelings and emotions of others they are interacting, without a judgement of the emotions. Lange et al. (2018) correlate *empathy* and *perspective-taking* as aspects of emotional intelligence which contribute to *transformational leadership* behaviours. Pinck and Sonnentag (2018) provide evidence to the fact that a leader's level of mindfulness and emotional intelligence correlates to increased levels of *positive affect* and *job satisfaction* of followers.

Ultimately, as noted by Ehrlich (2017), the capacity for emotional intelligence is built through mindful awareness and the orientation to be more emotionally attuned to our interiors and the interiors of others which builds the foundation for *effective leadership*.

3.6 Non-attachment and Non-judgement

Of the selected literature 19/36 articles (53%) referred to this theme, even though this comes with some complexity pertaining to the different terminology which is used in the literature to describe non-attachment. Hence, from the outset, the theme of non-attachment needs some clarification. In the selected articles the various authors use the term the term *non-attachment* interchangeably with the term *detachment* (Reb et al. 2015; Thompson, 2016; Verdorfer, 2016). However, for the sake of clarification, in the original Buddhist literature from which mindfulness as a secular practice is derived there is a difference between the two which is pivotal in an authentic understanding of the term. On the one hand *detachment* can be described as an aloofness that separates an individual from others, in Buddhist texts this is described as a form of suffering (Thompson, 2016). Conversely, non-attachment is a practice of being present with our experiences but not attached to the outcome or reliant on the cognitive processing of the experience (Thompson, 2016).

Jon Kabat-Zinn's (1994, p. 4) original definition of mindfulness as "paying attention in a particular way: on purpose, in the present moment, and without judgment" highlights the

quality of non-judgement which is coupled with non-attachment. It really means non-attachment and letting go of the automatic judgements that tend to occupy one's mind.

Ward and Haase (2016) note that the perspective of the *observer-self* that is non-attached to an experience facilitates a clear perception and calm insight into the experience and thus enables a leader to exercise wisdom when formulating a response to a situation. Walsh and Arnold (2018) refer to the *decoupling of the ego* which is a primary mechanism of mindfulness which enables a leader to engage in difficult situations, to view experiences more objectively. Correlated with these descriptions of non-attachment Verdorfer (2016) uses the term *reperceiving* as a depiction of the ability to engage in a perceptual shift, to hold a more objective stance of reality. Related to the term non-attachment Reb et al. (2015) refer to *decentering* as a component of mindfulness which facilitates a reduction in *ego-involvement* and *ego-defensiveness*, which facilitates a leader to hold a focus of the organizational goals over their own self-interests. Furthermore, Reb et al. (2015) state that a leader's ability to observe without jumping to premature judgments and conclusions facilitates better interpersonal interactions with employees. Also, a more objective approach enables a leader to offer time and space for followers thus building better relationships with employees and hence productivity. Conversely, Reb et al. (2015) warn that leaders who appear to be detached and unemotional may be less effective in building support from followers as emotions express beliefs, intentions and commitment. Similarly, a leader who appears to hold a distanced and objective stance can be viewed as apathetic and their passion for their work and leadership may be viewed as questionable (Reb et al., 2015). Ultimately, these divergent viewpoints need to be assessed in context and better understood as they are clustered and developed in relation to other themes. Also, in the context of servant leadership, detachment could be viewed as a display of high emotional intelligence reflected as the allowance for a subordinate to take the initiative and the lead on a project (Verdorfer, 2016).

3.7 Experiential practice - Embodiment

The theme of sustained experiential practice – embodiment was deemed to be a significant aspect of mindfulness playing a role and/or associated with leadership capabilities. This was documented in 26/36 articles (72%).

Karssiens, van der Linden, Wilderom, and Furtmueller (2014) and Varela (1999) refer to the human body as a complete unit incorporating the senses, breathing, emotions, thinking, and consciousness which create a functioning system in which the five senses and breathing form the connection between the internal and external world. Thus, human beings' function in the world through an embodied mind. Karssiens et al. (2014) and Brendel and Bennett (2016) describe mindfulness as impacting on human functioning creating a presence and embodiment which incorporates thoughts, feelings, emotions and images which influence one's thinking and behaviour in the present moment. This is understood as the foundation of our intentions and attitude from which one engages in the world. Furthermore, Brendel and Bennett (2016) and Chesley and Wylson (2016) note that intentional mindfulness practices are needed for leaders who aim to consistently and intentionally choose how they respond to situations and manage their interior states of being, thus embodying a leadership presence.

Kabat-Zinn (2003), Ward and Haase (2016), and Raney (2014) offer a description of the concept of *practice* in the context of mindfulness, which is depicted as a *way of being* and *way of seeing* which is embodied, inhabited, and developed through the implementation of the methods and techniques that comprise the discipline of mindfulness practice. This requires intention and volitional energy to develop, if the incumbent expects to derive the benefits of this practice. Reitz and Chaskalson (2016) highlight the requirement of sustained practice for leaders who wish to derive the benefits of mindfulness in their daily routines. Goldman Schuyler (2010) notes that developing mindful leadership skills is comparable to beginning a fitness program instead of learning a particular management skill. Furthermore, Goldman Schuyler (2010) comments that it is for this reason that mindfulness as a management tool to develop leadership capabilities is not commonly documented in leadership development publications.

Frizzell et al.'s (2016) research provides evidence of the importance of ongoing experiential formal and informal mindfulness practices (e.g., mindful eating, periodic retreats, and being part of a mindfulness community), which were documented by 17 of the 20 leaders they interviewed as being instrumental in supporting their leadership capabilities.

Brendel and Bennett (2016) advocate the benefits of embodiment and sustained experiential mindfulness practice which helps leaders to stay *grounded* in times of conflict and builds

resilience when engaging in stressful times, while also cultivating *creativity* and *resourcefulness* in ambiguous and complex circumstances.

Conversely, Reb et al. (2015) draw on social identification theory (Ashforth & Mael, 1989; Tajfel & Turner, 1979) and expose a potential downside of mindfulness practice that can be extrapolated into a leadership context as leaders may differentiate between the people that have a mindfulness practice and those that don't. The result could lead to a sense of separation and potentially a form of superiority, thus the people that do have a mindfulness practice could form categories to include and exclude people accordingly. Furthermore, Reb et al. (2015) note that mindfulness practice may not achieve intended results due to people not practicing appropriately or consistently, thus the benefits of mindfulness may not be realised in their leadership roles. Also, personal attitudes of *perfectionism* may hamper progress and conversely develop more anxiety and stress (Reb et al., 2015). On a more positive note, Reb et al. (2015) refer to *conservation of resources theory* (Hobfoll, 1989). Commenting that a leader's mindfulness practice may offer an opportunity for leaders to switch from *doing mode* into *being mode* thus creating some time-out to re-energise and re-balance their functioning system, thus creating an improved orientation to *decision-making* and the commensurate *action-taking*.

3.8 Meta-themes of mindfulness and leadership development in the current age.

In the selected literature, some of the authors referred to applications of mindfulness in the context of the previous age (conventional), in comparison to mindfulness in the current VUCA age (post-conventional; King & Badham, 2018). This offers an understanding of levels of mindfulness and potential development paths that depict a wide range from micro (individual) to macro (society) orientations of mindfulness in leadership development (Baron & Cayer, 2011). Given that these concepts depict the scope of the literature, the researcher deemed it necessary to include them as meta-themes as they contribute to the objectives of the study and assist in answering the research question.

King and Badham (2018) proposes that a useful way to overcome some of the ambiguity and conflict about mindfulness research and the articulation of mindfulness programs aimed at leadership development in the workplace is to draw distinctions between first-generation and second-generation mindfulness-based interventions. This endeavour pivots on the

understanding that first-generation mindfulness-based interventions tend to focus on mindfulness as a stress reduction tool in the VUCA workplace where focused attentiveness is much required. King and Badham (2018) refers to this as individual-instrumental mindfulness where mindfulness is used as an instrument of support to the performance of the organisation and the leaders that govern it. Alternatively, King and Badham (2018) proposes second-generation mindfulness, where mindfulness is viewed as a more substantial, diverse and collectively oriented concept, which refers more to *ends* rather than *means*.

Hence, King and Badham (2018) note that first-generation mindfulness approaches are more individually focused as they are related to personal experiences pertaining to awareness and attention in the here and now, stress reduction, emotional regulation and managing automatic processes like habitual thought and behaviour. Alternatively, a more comprehensive and collective focus on second-generation mindfulness would address the limitations and insubstantial formulation of what we term the *individual self*. Preferably, it will also address the concepts of group-mind, the reality of interdependence, relational mindfulness while also stressing the need for collaboration and cooperation in ethical thought and action in the world (King & Badham, 2018).

Further considerations pertaining to developing mindful leadership in our VUCA world are highlighted by Frizzell et al. (2016) in their depiction of vertical and horizontal development. Horizontal development pertains to the development of instrumental learning which is appropriate when problems and solutions are relatively simple. Alternatively, vertical development refers to structural increments in various developmental intelligences of human beings, that manifest as a more inclusive consideration about the self, others, nature and the essence of existence. Frizzell et al. (2016) draw reference to the contribution of mindfulness in the current age in creating opportunities for vertical development amongst leaders.

Similarly, Baron and Cayer (2011) highlight the requirement of organisations needing to adapt to the current age. Hence, they offer a depiction of leadership development which relates to a leader's stages of consciousness development, that refers to *conventional consciousness* epitomised as the point when the individual integrates the shared ways of seeing, thinking and acting that are configured as *real* by society. In this stage the inherent need for connection to the community is created by the individual's compromising and rule-abiding behaviours, thus

the subject loses their objective stance in relation to the group's orientation and will – they become integrated into the group. As the individual develops in the conventional stage, they build an affiliation within the group derived from their offering expertise and unique contributions to the group. This further integrates them into group-thinking and affiliation, to their detriment, their ability to self-objectify and question their worldview is diminished. Moving to the *post-conventional* consciousness development stage, which is facilitated through mindfulness practice, the individual becomes more mindfully aware and motivated by self-actualisation and generativity. In this stage the individual questions conventions and meaning structures that are perceived to be limitations in their development. They become more attuned to others and discerning of the quality of attention and mindfulness directed at understanding their lifeworld and the interdependence of systems. Furthermore, they become inspired by a long-term systemic vision of organizational development and as leaders they become effective agents of organizational learning and change (Baron & Cayer 2011).

Baron and Cayer (2011) identify two learning processes which facilitate a leader's development to post-conventional levels of consciousness that are created through mindfulness practice. Firstly, this involves recognising existing meaning structures and developing an ability to critically examine and reframe them. Secondly, suspending one's preconceptions of the world and engaging in direct experiential contact with reality. These are recognised as mechanisms in which mindfulness plays a significant role (Baron & Cayer, 2011).

Frizzell (2015) provides context to what we have discussed as mindfulness playing a role in leadership development in a secular context. This forms a foundation of part of a broader group of practices which can similarly be regarded as secular orientations to healthy physical and psychological well-being, Kornfield (2018) describes Buddhism as a *Science of Mind*; while Brown et al. (2007) refer to *Buddhist Psychology*. This orientation is known as the *Eightfold path*, which incorporates three general categories of practice, ethical conduct (right or skilful speech, action, and livelihood), mental discipline (right or skilful effort, concentration, and mindfulness), and wisdom (right or skilful understanding and thinking). Therefore, we would need to contextualise the potential benefits of mindfulness practice as documented in these paragraphs within the scope of a much more comprehensive system of human transformation which is applicable to people in their working environment and leadership (Frizzell, 2015).

4. Discussion

The purpose of this scoping review was to summarise and synthesise the current available literature that describes mindfulness playing a role in, or being associated with leadership development, with a view to extracting the core themes that display the mechanisms of why and how mindfulness contributes to leadership development. This scoping review investigated 36 articles which were selected through a process of articulated reference to a series of inclusion and exclusion criteria. A data chart was created to depict the salient features of each article thus extracting the pertinent information in categories of study design, country of origin, study population, number of participants included in the study, age range, male or female participants, the mindfulness technique or aspect which was investigated, leadership outcome measure, results: whether mindfulness played a role in leadership development or not. This structure assisted the researcher to create a framework for the process of thematic analysis. What was significant in creating the data chart was firstly the year of publication, where it was noted that all the articles were published between 2009 and 2018, with 47% of these articles being published between 2016 and 2018, indicating a significant increase in publications that pertained to Mindfulness and leadership development over the past three years. This concurs with the AMRA depiction (see Figure 1) of the present burgeoning interest in mindfulness. Also, the mindfulness techniques that were utilised in the studies were very generalised, without one particular technique being documented as being more significant or efficacious than any other. This would appear to suggest that a comparatively wide variety of mindfulness techniques may be of value within the context of leadership development.

Seven themes were identified which depicted the scope of the literature under investigation. These include self-regulation, non-attachment and non-judgement, present-moment awareness and acceptance, self-awareness, emotional intelligence, metacognition and experiential engagement-embodiment. These seven themes represent the ways in which mindfulness is associated with, or contributes to leadership development.

From the outset, the researcher noted that the selected literature identified the need for good leadership in the current VUCA age where organisational demands are complex, and most current approaches to leadership were noted as lacking. As such, there exists a fundamental need to create new methods of leadership development. However, the literature that describes

mindfulness contributing to leadership is diverse, spanning multi-disciplinary science and a variety of spiritual/religious systems as well as popular psychology books and magazines. This complexity is problematic when describing mindfulness as secular practice with universal application which could potentially benefit all people in leadership roles. As such, a need was identified to obtain an integrated overview of existing research on the topic. This study provided an opportunity to scope and review this selected literature to provide insight and clarity to the primary research question: *What is the role of mindfulness in leadership development?* and secondary research question: *What are the mechanisms of mindfulness that play a role in leadership development?*

The scoping review found that mindfulness was deemed to be significant in leadership development as noted in all 36 articles. The researcher extracted seven core themes which were ranked in the order of the extent to which they were documented as contributing to leadership development in the selected articles. The themes of self-regulation and self-awareness were represented in 32 of the 36 articles and was one of the most prominent and well-documented themes to emerge from the study. The theme of emotional intelligence was highlighted in 29 of the 36 articles as contributing to leadership development. present-moment awareness and acceptance and also experiential practice-embodiment were equally represented in 26 of the 36 articles. The mindfulness capacity of metacognition was documented in 22 articles and then non-attachment and non-judgement noted in 19 articles. These scores, and the comparative prevalence of the self-awareness and self-regulation themes suggest that these may represent the deep core or primary mechanism of mindfulness which contributes to leadership development (Ehrlich, 2017; Glomb et al., 2011; Kinsler, 2014; Mohapel, 2017). Consequently, it would imply that these mechanisms of mindfulness could be the core focus when developing or assessing the efficacy of mindfulness-based interventions that may build leadership capabilities.

The literature also documented different types and forms of leadership and identified various mechanisms of mindfulness which played a role in developing these leadership styles. *Conscious leadership* (Ward & Haase, 2016) is described as a concept which is created through expanded consciousness and self-awareness (Ward & Haase, 2016). *Transformational leadership* is identified as a leadership style (Kinsler, 2014; Walsh & Arnold, 2018) that is

developed through mindfulness and is contrasted in the literature with *abusive supervision* which in this context is created through mindlessness (Reb et al., 2015). *Authentic leadership* is developed through self-awareness and self-regulation (Baron & Cayer, 2011; Reb, et al., 2015). *Charismatic leadership* is enhanced through a leaders present-moment awareness. *Resonant leadership* is descriptive of high levels of present-moment awareness and self-awareness (Boyatzis & Mckee, 2005). Furthermore, mindfulness is correlated and contextualised as playing a role in the development of what the respective authors termed *Adaptive leadership* (Raney, 2014), *Servant leadership* (Verdorfer, 2016) and *Self-leadership* (Frizzell, 2015; Reddy & Srinivasan, 2015)

Furthermore, the analysis of the themes elucidated mechanisms which contributed to mindfulness or were associated with mindfulness and regarded as efficacious in developing leadership. Self-regulation impacted on leader's levels of focus, attention and engagement (Mohapel, 2017) and contributed to managing automatic responses, while also facilitating flexibility and open-ness (Kinsler, 2014; Mohapel, 2017; Pearlman, 2015). These mechanisms were linked to self-efficacy (Reb et al., 2015), multi-tasking (Ehrlich, 2017) and the development of resilience (Good et al., 2016). Self-regulation also formed a buffer against emotional exhaustion (Walsh & Arnold, 2018) and assisted in goal setting and goal-achievement (Good et al., 2016; Reb et al., 2015) as well as being correlated to self-leadership skills (Sampl et al., 2017).

The present-moment awareness and acceptance theme displayed a contribution to a leader's ability to be focused and attentive (Brendel & Bennett, 2016; Roche et al., 2014; Wasylikiw et al., 2015) which contributes to attentive listening (Bavelas et al., 2000) and leaders being open and curious (Reitz & Chaskalson, 2016). These attributes were documented to build equanimity, authenticity and better relationships with followers (King & Haar, 2017; Sethi, 2009) and also build forgiving behaviours (Verdorfer, 2016) and adaptive coping and nullifying stress and anxiety (Reb et al., 2014, 2015), while developing creativity in decision-making and decreased decision bias (Decuyper et al., 2018).

Metacognition was shown to be related to a leader's ability to disengage their autopilot (Glomb et al., 2011; Ward & Haase, 2016), maintain the perspective of the observer-self (Ward &

Haase, 2016), and manage ego-defensiveness in order to maintain a broad flexible stance, thus an enhanced ability for leaders to handle volatile situations and build better relationships and thus productivity (Reb et al., 2015). Verdorfer (2016) refers to metacognition as a theme of mindfulness which *diminishes bias* and orientates a leader to their basic values, thus achieving a higher level of leadership *authenticity*. A potential negative attribute was noted as a leader's metacognitive ability may be misconstrued as being unemotional or detached (Reb et al., 2015). Alternatively, Reb et al. (2015) state that that metacognition could also be viewed as facilitating the expression of emotions that are consistent with a leader's intentions. Therefore, instead of appearing unemotional or detached, a leader may be viewed as more authentic as their expression is aligned to their intentions (Reb et al., 2015).

As previously mentioned, the theme of self-awareness was found to be the most prevalent in the selected articles and thus regarded a core theme that couples with self-regulation in assisting a leader to be attentive and attuned to themselves and the environment (Goleman, 2019; Lange et al., 2018), thereby fostering curiosity (Reitz & Chaskalson, 2016) and authenticity (Ehrlich, 2017; Kinsler, 2014). Self-awareness was correlated with *informed mindfulness*, described as creating a heightened awareness of the responsibilities of choice (Pearlman, 2015). Self-awareness was also linked with a leader's self-efficacy and self-mastery (Furtner et al., 2018; King & Haar, 2017).

Emotional Intelligence was documented as correlated to present-moment awareness and self-awareness (Ehrlich, 2017; Goleman, 1995; Kinsler, 2014) which contributes to transformational leadership behaviours as well as developing empathy and enhanced perspective-taking (Lange et al., 2018). These mechanisms of mindfulness were noted as contributing to leadership development and the increased positive affect and job satisfaction of followers (Pinck & Sonnentag, 2018).

Non-attachment and non-judgement were clustered together in the thematic analysis phase of the scoping review as they depict similar qualities which correlate with the perspective of the Observer-self (Reb et al., 2015; Thompson, 2016; Verdorfer, 2016; Ward & Haase, 2016) and the ability to de-couple the egoic mind (Walsh & Arnold, 2018). This concept is also correlated with re-perceiving (Verdorfer, 2016) and de-centering (Reb et al., 2015), which implies a

perceptual shift for a leader to hold a more balanced objective stance of reality which leads to a reduction in ego-involvement and ego-defensiveness (Reb et al., 2015) . This ability is linked to a leader's ability to build better relationships with followers (Reb et al., 2015; Verdorfer 2016).

Lastly, the theme of experiential practice was clustered with the theme of embodiment as the two are inextricably linked. This refers to the holistic embodied presence of a leader (Karssiens et al., 2014; Varela, 1999), which is developed and maintained by a committed mindfulness practice requiring intention and volitional energy which manifests as a *way of being* and *way of seeing*. This concept essentially describes the efficacy of the leader's authentic presence which creates influence amongst followers (Brendel & Bennett, 2016; Karssiens et al., 2014) and which is developed through an ongoing committed practice. A point of discussion is the difference of the corporate mindset of attempting to teach leadership skills from the outside-in, through educational courses as opposed to the effectiveness of a mindfulness approach which epitomises an inside-out method (Goldman Schuyler, 2010). Some negative formulations of this theme were also documented. Reb et al. (2015) described the potential emergence of an "us and them" scenario where leaders may distinguish between those that are practicing mindfulness and those that aren't. Based on this, a superiority complex may develop, in which leaders develop categories to include or exclude people, coupled with the potential to develop perfectionistic attitudes which may be detrimental to their mindfulness practice. Notwithstanding, and with reference to the literature investigated, these descriptions are incongruous with the generally agreed depictions of the qualities of mindfulness practice impacting on authentic embodied presence (Frizzell et al., 2016). Finally, this theme was also correlated with improved decision-making and action-taking (Reb et al., 2015), due to an ability of mindful leaders to be aware of their embodied state of being and switch from doing-mode to being-mode (Hobfoll, 1989) to facilitate a conservation of their resources.

The scope of this review also offered a broad context of mindfulness-based interventions which focus on vertical development as opposed to horizontal development of leaders (Frizzell et al., 2016) and individual-instrumental mindfulness applications to leadership, depicted as first-generation mindfulness and a more comprehensive, substantial and beneficial application of mindfulness described as second-generation mindfulness interventions (King & Badham, in press). The review also noted mindfulness applied to consciousness development from

conventional consciousness to post-conventional consciousness applied to leadership (Baron & Cayer 2011). Finally, the scoping review provided context and insight into the original Buddhist conceptualisation of the soteriological endeavours of mindfulness applied to the Eightfold path (Brown et al., 2007; Frizzell, 2015; Kornfield, 2018) as a broader system of mindfulness which can be applied to leadership development.

What appears significant from these findings and what may offer a path through the challenges of the current VUCA age, is firstly an enhanced theoretical understanding of the role of mindfulness in leadership development. Secondly, how this theoretical understanding may flow into experiential practices of mindfulness which are correlated with leadership development.

In relation to theory, all the themes that were elucidated in the thematic analysis: self-regulation, non-attachment and non-judgement, present-moment awareness and acceptance, self-awareness, emotional Intelligence, metacognition and experiential engagement-embodiment, refer to psychological features of human functioning and furthermore, many of them refer to transpersonal psychological development (Wilber, 2000). This is indicated by the concepts of: ego-depletion, the observer-self, de-coupling of the self, cognitive defusion, non-reactivity, non-judgement, decentering, re-perceiving, witnessing and equanimity. These concepts describe the transcendent qualities of human functioning and as such represent dimensions of spiritual development. This offers a broader perspective of what may be acknowledged and incorporated into the field of psychology beyond the confinements of Cartesian Dualism (Wilber, 2000) and thus represent a more holistic perspective of Body, Mind and Spirit applied to human functioning and leadership development. The core premise of this endeavor would involve a leader's consciousness development to post-conventional consciousness (Baron & Cayer, 2011) epitomised as vertical development (Frizzell et al., 2016) also referred to by King and Badham (2018) as 2nd generation consciousness. We can also correlate this development with Maslow's hierarchy of needs and conceptualisation of growth needs and deficiency needs, where growth needs are recognised as a higher-order orientation towards self-actualisation and transpersonal development (McLeod, 2018). Ultimately, this development path is one of self-mastery (Lutz et al., 2015) and self-leadership (Sampl et al., 2017) which can be applied to all human beings. It is on these grounds that the researcher correlates mindfulness as a secular practice that can be viewed as mental training contributing to spiritual development, which is applicable to all leaders.

With regards to the findings of this study correlated with the practical implications of mindfulness applied to leadership development. A core feature of this endeavour which was described in the theme of *experiential practice-embodiment*, as the intention and commitment of the leader to fully incorporate mindfulness practices in their daily routine, whether it be formal or in-formal practices to authentically manifest as a *way of being* and *way of seeing* (Kabat-Zinn, 2003). Ashford and DeRue (2012) describe the importance of *mindful engagement* as a process of how a person may embody their experiences, process their experiences and reflect on their experiences in ways that enhance the experience and the learning derived from the experience. Furthermore, Ashford and DuRue (2012) correlate mindful engagement with David Kolb's (1984) theory of optimal experiential learning which highlights *active experimentation* and *experiential practice* as the gateway to optimal learning and development. With regards to leadership development, Reitz and Chaskalson (2016) noted that the development of enhanced leadership abilities and experiences was correlated to the amount and quality of the mindfulness practice that was followed. Furthermore, as noted by Goldman Schuyler (2010) mindfulness is not a quick fix, pick-up-when-you-please practice or Instant-gratification exercise that seems to be prevalent in the western world. Rather, its benefits are only developed through sustained and disciplined practice. It is for this reason that Frizzell (2015), Kornfield (2018), and Brown et al. (2007) contextualise mindfulness as a component of the eightfold path which represents a much larger system of practices which correlates with optimal human functioning and human experience and which can be applied to leadership development.

5. References

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Chapter 3

Limitations, Recommendations and Conclusion

1. Summary of the study

This study recognised that our current VUCA world results in an ever-increasing demand for effective and good leadership while also identifying that most current leadership theories seem to be inadequate to meet these challenges, as they fail to address the interior states from which leader's function. However, mindfulness has been hypothesised to be one possible solution to this problem, notwithstanding that the literature that encompasses this concept is diverse; spanning esoteric, religious, and scientific fields. Hence, the objective of this study was to review and scope the published literature to offer clarification of the themes, mechanisms, and efficacy of mindfulness applied to leadership development, while exposing evidence gaps and proposing recommendations for future researchers.

Arksey and O'Malley's (2005) scoping review method was used as the framework for the study. Five databases were searched for literature published in English after the year 2000 that complied with the inclusion and exclusion criteria that were set for the study. The 3513 titles that were extracted in the search were processed through various levels of abstraction pertaining to title, abstract, and article, resulting in 36 articles being selected on which to base the scoping review. Following the framework analytical approach of Braun and Clarke (2006), the articles were thematically analysed and seven themes were identified: (1) self-regulation, (2) non-attachment and non-judgement, (3) present-moment awareness and acceptance, (4) self-awareness, (5) emotional intelligence, (6) metacognition, and (7) experiential practice-embodiment, which elucidated the scope of the role of mindfulness in leadership development.

The findings emanating from the review have a number of practical implications. First of all, the findings present a fairly cogent case for the value of mindfulness in the context of leadership and leadership development and suggest that there may indeed be significant value in striving to enhance leadership via this avenue. The themes that were identified from the articles also point to the specific dimensions of mindfulness that have been found to be most saliently associated with leadership development, which could serve to guide the development and implementation of mindfulness-based leadership interventions. Lastly, the development of

mindfulness in theory and practice offers a gateway for the field of psychology to further its reaches into more holistic configurations of human functioning encompassing body, mind and spirit. The meta themes that were elucidated showed mindfulness applied to leadership in the context of spiritual development and transcendent features of human nature. This marriage of spirituality with psychology as depicted in the burgeoning field of transpersonal psychology offers a significant opportunity for further studies of mindfulness to be applied to leadership.

2. Limitations of the study

The scoping review methodology that was used in the study allowed for the inclusion of a wide variety of articles to be incorporated in the project, including grey literature, as is common practice with scoping reviews (Arksey & O'Malley, 2005). The latter types of articles largely represent phenomenological investigations of the role of mindfulness in leadership (Remenyi, Williams, Money, & Swartz, 1998), which could be construed as a limitation as some of the information in the articles may reflect subjective opinions derived from first-person reports and anecdotal expressions of mindfulness. However, this limitation was weighed against the value of such articles in compensating for publication biases towards mostly reporting significant findings and underreporting findings where no significant relationships between the constructs in question have been found.

Another limitation that can be identified is the relative speed with which a large number of literature sources had to be screened, considering that 3513 articles were initially identified, which was filtered down to 36, which were included in the scoping review. Thus, one could question the depth involved in the search and selection process. However, this risk is factored into the method of a scoping review, whereby certain steps are taken to expedite the process to get results from vast and diverse literature that pertain to the core themes that relate to the research question (Daudt, van Mossel, & Scott, 2013). Furthermore, often scoping reviews are not isolated projects, rather they serve the purpose of summarising and synthesising information, and extracting core themes, which expose evidence gaps and offer directives for further research. Thus, they can be seen as a first step in a larger endeavour (Daudt et al., 2013).

A further limitation of the study is that a quality control mechanism was not implemented in the study. However, this step is not deemed essential for scoping reviews (Levac, Colquhoun, & O'Brien, 2010), and the aim of the study was merely to obtain an overview of existing research on the relationship between mindfulness and leadership development. This limitation is further compounded by the context of the study in which the researcher worked independently, processing each article individually, thus potentially displaying a biased view when interpreting information. This quality control element of the study may have been minimised by a collaborative approach offering different interpretations of the various themes. Adding further complexity to this limitation is that fact that the researcher has a personal interest in mindfulness. These limitations were managed through a rigid adherence to the scoping review process of Arksey and O'Malley (2005) and Levac et al. (2010) and the framework analytical approach of Braun and Clarke (2006). Also, the researcher endeavoured to be mindfully and ethically aware of holding a balanced and objective viewpoint when attending to the salient features of the literature. For this reason, the structures of the scoping review were followed in detail and reporting mechanisms like the data-chart were used optimally to standardise reporting and thus provide reproducible results (Munn et al., 2018).

From a cultural bias perspective, the inclusion criteria limited the study to literature published in the English language which may indicate a bias towards English-speaking countries and their associated cultural contexts. This is further compounded by the countries of origin from which much of the literature was derived, namely the USA and European countries, which accounted for 83% of the literature under review, which essentially represents the thinking of the western world. This may be viewed as a limitation as the concept of mindfulness originated in the east and then migrated to the west in which some of the original theoretical underpinnings and experiential practices were interpreted and fragmented to take on a new form which is applicable to the western world. Thus, the literature included in this study could represent a marginalised viewpoint of mindfulness applied to leadership development as contextualised and applied in the western world. Similarly, it is also plausible that studies on the topic have been conducted in other non-English-speaking contexts such as South America, the Middle East, and Africa, which would not be represented in this study. Given that constructs such as leadership and mindfulness are subject to culturally specific interpretations and manifestations, this represents a significant gap that needs to be addressed in future studies.

3. Recommendations for future studies

There are abundant opportunities for future research. This study noted that much of the research which was depicted in the 36 articles was qualitative in nature, hence there exists a gap for researchers to do more quantitative research. Researchers could focus their attention on quantitative research aimed at identifying the core skills that have been shown in this study to build mindfulness: self-regulation, non-attachment and non-judgement, present-moment awareness and acceptance, self-awareness, emotional intelligence, metacognition and experiential practice-embodiment. This will also enable the relative importance of these dimensions to be empirically verified, quantified, and ranked, which would in turn support endeavours aimed at developing mindfulness-based interventions to create modules that are aimed at understanding and building practices and skills that pertain to these identified themes.

Given that the findings emanating from the review outline the salient dimensions of mindfulness that have been found to be associated with leadership development, the way is paved for the development and validation of measurement instruments focused specifically on mindfulness in the context of leadership. This will also enable the effectiveness of mindfulness-based interventions in the context of leadership to be empirically assessed. At present, mindfulness appears to be assessed in a piecemeal fashion within the domains of leadership and leadership development (as research often tends to focus on isolating specific dimensions of mindfulness), resulting in a fragmented view of the association between the constructs (which this scoping review aimed to address). Developing a measuring instrument that integrates multiple dimensions of mindfulness, would enable the construct to be assessed in a more integrative and complete manner, which would in turn facilitate the emergence of a more comprehensive understanding of the association between leadership and the most salient dimensions of mindfulness. Such an endeavour would also enable the relative importance and contribution of each of these dimensions of mindfulness in supporting leadership development to be empirically quantified, which would support the development of more effective interventions that specifically target and emphasise those dimensions of mindfulness that are most likely to promote leadership development.

It was noted that much of the literature that was scoped in the present study was derived from western contexts such as the USA and Europe. This may represent a somewhat fragmented view of mindfulness applied to leadership. Hence, it is recommended that future research be conducted on the relationship between mindfulness and leadership development in non-English-speaking contexts. Given the origin of the construct, it would seem especially pertinent to obtain an overview of research findings emanating from the Eastern countries from which mindfulness originates. This will provide us with research that might display a broader scope of the application of mindfulness in leadership.

Due to the fundamental experiential component of mindfulness practice and what was noted in this study about the importance of a consistent and sustained experiential practice, researchers could focus on assessing how leaders' home practice is transferred into their working environment and vice-versa, as well as the different mindfulness practices that are applied in these contexts. This will provide understanding how different leaders practice and experience mindfulness and the efficacies of these practices and the correlated results. Finally, there also appears to be significant potential in conducting experimental and/or quasi-experimental studies where the effect of specific mindfulness-based interventions on leadership development could be empirically investigated.

4. Conclusions

On the basis of a scoping review, it was found that in the diverse array of literature which describes the role of mindfulness in the context of leadership development, there are seven core elements and mechanisms that facilitate this development: self-regulation, non-attachment and non-judgement, present-moment awareness and acceptance, self-awareness, emotional intelligence, metacognition and experiential practice-embodiment. These seven themes depict capacities that are intrinsic aspects of human functioning, available to all people (Williams & Kabat-Zinn, 2011) and descriptive of psychological and spiritual development. It is on these grounds that mindfulness can be contextualised as a secular practice with a universal application, that is accessible to all people to enhance their leadership orientation whether it be in the context of self-leadership or any other form of the leadership styles that were identified.

Furthermore, as the western world inherited these conceptualisations of mindfulness from our eastern counterparts it would be advantageous to continue the dialogue and migration of ideas, concepts and practices that mindfulness offers in its full spectrum of applications and the deep core of its original intention of soteriological development.

Finally, as the development of interventions evolves to promote mindfulness and leadership skills, the focus should highlight the development of self-regulation, non-attachment and non-judgement, present-moment awareness and acceptance, self-awareness, emotional intelligence, metacognition and experiential practice-embodiment. Based on the findings of the scoping review, it would appear that such efforts would hold significant promise for promoting leadership development in the context of an ever more complex and uncertain world where such skills are much needed.

5. References

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APPENDIX: DATA CHARTING TABLE

Theme abbreviations: Experiential practice-embodiment (EPE), Self-awareness (SA), Emotional intelligence (EQ), Present moment awareness and acceptance (PMA/A), Metacognition (MC), Non-attachment and Non-judgement (NA/NJ), Self-regulation (SR)

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EPE	SA	EQ	PMA/A	MC	NA/NJ	SR
Sethi (2009)	Expert opinion (Qualitative)	N/A	General	General	✓	✓	✓	✓	✓		✓	✓
Dhiman (2009)	Exploratory Survey (Qualitative)	N/A	General	N/A	✓	✓	✓	✓	✓	✓	✓	✓
Langer (2010)	Expert Opinion (Qualitative)	N/A	General	N/A	✓	✓			✓			
Baron and Cayer (2011)	Conceptual Article (Qualitative)	N/A	Mindfulness Meditation	Consciousness Development	✓							
Ashford and DeRue (2012)	Article (Qualitative)	N/A	Mindful Engagement	General	✓	✓						

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
George (2012)	Expert opinion (Qualitative)	N/A	General	General	✓	✓	✓	✓	✓			✓
Raney (2014)	Article (Qualitative)	N/A	4 Facets of Mindfulness	Leadership in uncertainty	✓		✓	✓	✓		✓	
Kinsler (2014)	Article (Qualitative)	N/A	Mindfulness	Authentic Leadership	✓		✓	✓	✓			✓
Reb, Narayanan, and Chaturvedi (2014)	Empirical Research (Quantitative)	Students (n=170; mean age: 39 years; 55% male)	Trait Mindfulness	Employee Well-being/Performance	✓		✓	✓	✓	✓		✓
Roche, Haar, and Luthans (2014)	Empirical Research (Quantitative)	General population (n=697)	General	Depression, Anxiety, Negative Affect	✓		✓	✓		✓	✓	✓
Karssiens, van der Linden, Wilderom, and Furtmueller (2014)	Conceptual Article (Qualitative)	N/A	Embodiment of mindfulness	Embodiment	✓	✓	✓	✓	✓			✓
Wasylikiw, Holton, Azar, Cook, and Dickinson (2015)	Empirical Research (Mixed methods)	Health-Care professionals (n=11; mean age: 50.3 years)	Mindfulness Awareness Practice	Percieved Stress/Leadership Effectiveness	✓	✓	✓	✓		-	-	✓

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
Perlman (2015)	Expert Opinion (Qualitative)	N/A	Informed Mindfulness	General	✓	✓	✓	✓	✓			
Reb, Sim, Chintakananda and Bhawe (2015)	Expert Opinion (Qualitative)	N/A	General	General	✓	✓	✓	✓	✓	✓	✓	✓
Frizzell (2015)	Doctoral Thesis (Qualitative)	Managers/Leaders (n=20; 65% male)	Mindfulness Meditation	Individuals perceived value of mindfulness on leadership	✓	✓	✓	✓	✓	✓	✓	✓
Chesley and Wylson (2016)	Empirical Research (Mixed methods)	Change leaders (n=19; age range: 30 - 69 years; 53% male)	Mindfulness general	Managing ambiguity	✓	✓	✓	✓	✓			✓
Baron (2016)	Empirical Research (Mixed methods)	Managers/Leaders (n=99; mean age: 43.8 years; 59% male)	Mindfulness general	Authentic Leadership	✓		✓	✓	✓			✓
Ward and Haase (2016)	Conceptual Article (Qualitative)	N/A	Mindfulness General	Expanded Consciousness	✓	✓	✓	✓	✓	✓	✓	✓

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
Brendel, Hankerson, Byun, and Cunningham (2016)	Quantitative Research (Quantitative)	Leaders (n=41; 29% male)	Mindfulness General	5 Measures of leadership effectiveness	✓	✓	✓	✓	✓	✓		✓
Verdorfer (2016)	Article (Quantitative)	Leaders/Followers (Study 1 n=167, mean age: 29.9, 69% male; Study 2 n=305, mean age: 46.9, 70% male)	Mindfulness general	Humility and Servant Leadership	✓	✓	✓	✓		✓	✓	✓
Brendel and Bennett (2016)	Critical review (Qualitative)	N/A	Mindfulness and Somatics practice	Embodied Leadership	✓	✓	✓	✓	✓	✓		✓
Reitz and Chaskalson (2016)	Expert opinion (Qualitative)	N/A	Mindfulness general	Enhanced Leadership abilities	✓	✓		✓	✓	✓		✓
Frizzell, Hoon, and Banner (2016)	Empirical Research (Qualitative)	Manager/Leaders (n=20) University students	Mindfulness general	Enhanced Leadership abilities	✓	✓	✓	✓	✓	✓	✓	✓
Sampl, Maran, and Furtner (2017)	Journal article (Quantitative)	(n=109; mean age: 22 years; 25% male)	Mindfulness	Self-Leadership	✓	✓	✓	✓				✓

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
Ehrlich (2017)	Expert Opinion (Qualitative)	N/A	Mindfulness general	General	✓	✓	✓	✓	✓	✓		✓
King and Haar (2017)	Empirical Research (Quantitative)	Engineering professionals (n=84; mean age: 39 years; 75% male)	Mindfulness general	Self-mastery/Leadership-Organizational Transformation	✓	✓	✓		✓	✓	✓	✓
Furtner, Tutzer, and Sachse (2018)	Empirical research (Quantitative)	University students (n=174; mean age 21.9; 20% male)	Mindfulness (Observing component)	Self-leadership	✓		✓	✓		✓		✓
Pinck and Sonnentag (2018)	Quantitative Research (Quantitative)	(Leaders: n=65, mean age: 46.9 years, 75% male; Employees: n=153, mean age: 39.1 years, 52% male)	Mindfulness general	Transformational Leadership / Employee Well-being	✓		✓				✓	✓
Carleton, Barling, and Trivisonno	Quantitative Research		Trait									

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
(2018)	(Quantitative)	Leader/followers (Leaders n=183; mean age:42.7;50% male; Followers n=183, mean age: 32 years, 47% male)	Mindfulness	Trait Mindfulness impacting Transformational Leadership	✓		✓	✓	✓	✓	✓	✓
King and Badham (2018)	Expert Opinion (Qualitative)	N/A	Mindfulness general	Leadership in the VUCA world	✓	✓	✓	✓	✓	✓	✓	✓
Lange, Bormann, and Rowold (2018)	Quantitative Research (Quantitative)	Leaders/Subordinates (Leaders n=60; mean age: 43, 62% male; Subordinates n=184, mean age: 32 years, 47% male)	Trait Mindfulness	Transformational Leadership	✓		✓		✓	✓	✓	✓
Walsh and Arnold (2018)	Quantitative Research (Quantitative)	General population (n=505; mean age: 37.3; 60% male)	Trait Mindfulness	Transformational Leadership	✓	✓	✓	✓		✓	✓	✓
Mohapel (2018)	Journal article (Qualitative)	N/A	Mindfulness general	Focussed leadership	✓	✓	✓		✓	✓	✓	✓

Study	Type of publication	Study population	Mindfulness technique investigated	Leadership outcome measure	Results - Mindfulness develops leadership	Themes						
						EP E	SA	EQ	PMA/A	MC	NA/NJ	SR
King and Badham (2018)	Journal Article (Qualitative)	N/A	1ST / 2ND Generation Mindfulness	2nd Generation Mindful Leadership Interventions	✓	✓	✓	✓		✓	✓	✓
Decuyper, Audenaert, and Decramer (2018)	Journal Article (Quantitative)	Nurses (n=277; mean age: 45.4 years; 21.7% male)	Mindfulness general	Transformational leadership	✓	✓	✓	✓	✓	✓	✓	✓
Donaldson-Feilder, Lewis, and Yarker (2019)	Journal Article (Mixed methods)	N/A	Meditation / Mindfulness	Systematic review	✓	✓	✓	✓	✓	✓	✓	✓

