



A scoping review of yoga and emotional-social intelligence in children and youth

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COMMENTS

Note to the reader:

The editorial style of this minor dissertation follows the prescribed format as stipulated 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 format of a scientific research article.

DECLARATION

I, Natasha de Oliveira, hereby declare that “A Scoping Review of Yoga and Emotional-Social Intelligence in Children and Youth” is my own work and that all the sources that I have used or quoted from 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.

NATASHA DE OLIVEIRA

March 2020

DECLARATION OF LANGUAGE EDITING

I hereby declare that I, Natasha de Oliveira, was responsible for the editing of the minor dissertation: **A Scoping Review of Yoga and Emotional-Social Intelligence in Children and Youth.**

NATASHA DE OLIVEIRA

March 2020

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ABSTRACT

Title: A Scoping Review of Yoga and Emotional-Social Intelligence in Children and Youth

Background and objective: A globalized world manifests new opportunities as well as new challenges. Our modern world identifies the need for contemporary citizens to Transform, Adapt, Cope and Develop (TACD) with the flow of modernity. Emotional and social competencies, resources and skills are required in the form of Emotional-Social Intelligence (ESI) to improve Emotional Intelligence (EQ). Thus, becoming proficient in ESI abilities will equip young people with a greater capacity to TACD. Even though the practice of Yoga is associated with various ESI domains, such literature remains scattered across academic disciplines and sub-disciplines. Although connections are evident, there is a lack of direct focus on the potential relationship between Yoga and ESI, towards enhancing EQ. For this reason, results from the Yoga literature are often not contextualized according to the constructs of ESI and EQ. In response to this gap, a scoping review aimed to bring greater coherence to the isolated and scattered literature and to piece together the research that pertains to children, youth, Yoga as well as ESI and EQ as conceptualised in Bar-On's (2006) model. It is hoped that this will initiate the process towards literature integration, as well as identification of gaps in existing knowledge and promising avenues for future research.

Methods: A scoping review was considered a well-suited methodology for this study owing to the vast expanse of literature on the topic. For this purpose, the scoping review methodology of Arksey and O'Malley (2005) was specifically used. Articles on the topic were searched for within two electronic databases (Web of Science and Scopus). Articles were included based on predefined inclusion and exclusion criteria with those that were written in the English language and published from the year 1995 included in the study. Along these lines, articles were included

if they mentioned one or more of the ESI dimensions, in the context of Yoga, within a population of children or youth. These articles were then thematically analysed, with the data from these include studies then charted.

After numerous stages of extraction with the selected databases (Web of Science and Scopus), 24 articles were eventually included in the study. From the included articles, a thematic analysis was conducted to identify the ESI themes and subthemes that were associated with Yoga.

Additionally, data was grouped and charted according to the ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques and well-being domain.

Results: From the thematic analysis the main themes that were extracted and charted were the intrapersonal, interpersonal, stress management and general mood, together with the minor subthemes of impulse control, stress tolerance, interpersonal relations, self-awareness, self-regard, independence, optimism and happiness. More specifically, from the extracted main themes, positive correlations were found between Yoga and the intrapersonal, stress management and general mood major themes, and the minor subthemes of impulse control, self-regard, self-awareness, stress tolerance, interpersonal relations and happiness. Results from the data charting revealed that there has been an increase in publications from 2010, with the bulk of these articles published between 2013-2018. As far as the study samples were concerned, the data charting revealed that typical studies reporting on Yoga interventions made use of sample sizes under one hundred, with research participants that were predominantly Caucasian, around eleven years of age on average, with no presenting condition and from a variety of grades, genders as well as schooling levels. These Yoga interventions were administered primarily in school settings over a period of less than a year and were predominantly centred on the Hatha style of Yoga, and mainly made use of breath and posture as techniques.

Additionally, the incorporated literature stemmed mainly from the West (namely the USA) and made equal use of quantitative as well as mixed method research designs. Finally, the data charting revealed that Yoga interventions not only correlated with dimensions of ESI and EQ, but also with increased well-being.

Conclusions: To begin with, the literature that connected Yoga to the main and minor ESI themes of Bar-On's (2006) model was extensively spread across a variety of disciplines. The scoping review, which served to analyse and synthesise this literature, charted themes and valuable data that highlight the connections, gaps and trends that could further guide more focused, future studies. The results from this scoping review ultimately reveal that Yoga holds promise as an intervention that enhances ESI among children and youth, and that Yoga possesses latent potential in developing these ESI skills and subskills within a variety of cultural contexts as well with diverse age, gender, grade and racial groups. The scoping review ultimately pieces together the existing knowledge of Yoga and ESI in children and youth, in aim of further investigating Yoga-based SEL programs that develop ESI competencies to enhance EQ and PYD.

Keywords: Yoga, Emotional-Social Intelligence, Emotional Intelligence, Bar-On model, Social and Emotional Learning, Child, Youth, Scoping review, Positive Psychology, Positive Youth Development.

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Chapter 1

Introduction, Problem Statement and Methods

This chapter serves to orient the reader towards the study that this mini dissertation is based upon. The main aim of the study was to conduct a scoping review on the association between Yoga, Emotional-Social Intelligence (ESI) and Emotional Intelligence (EQ) as conceptualized by Bar-On (2006), specifically among children and youth. This will be achieved by collecting, categorising, summarising and synthesising the literature pertaining to Yoga and ESI in children and youth. In this context, the present chapter serves to provide an outline of the study and its associated methodology. Accordingly, section one contextualises the study with an introduction to the study's background and intention. This is followed by a literature review aimed at describing, explaining, and clarifying the key terms and concepts associated with the study, including Yoga, ESI and EQ. Subsequent to this, the problem statement and rationale underlying the study are identified. The chapter is then concluded with an outline of the methodology as well as the ethical considerations applicable to the study.

1.1 Contextualization of the study.

Globalization fuels a rapidly changing society, and is characterized by dynamic change, mobility, competition as well as information and technological advances. At the intersection where local realities meet the forces of global change, younger generations have been thrown into multiple worlds (Super, Harkness, Barry, & Zeitlin, 2011). Such a globalized world exposes younger generations to new demands, expectations, standards and options, resulting in constant stimulation and stress (Hagen & Nayar, 2014). Over and above this, climate change and competition for natural resources require that young people are equipped to meet these challenges through intrapersonal and interpersonal skills (Newman & Dusenbury, 2015). These skills include teamwork, self-management, awareness, communication skills,

problem-solving, independence, and cultural sensitivity amongst others (Bar-On, 2006; Geisinger, 2016; Newman & Dusenbury, 2015).

In order to function optimally across different environmental contexts, younger generations need to be developmentally prepared in terms of social competencies and emotional resources, together with the skills required to adapt and cope (Baczyńska, 2015; Super et al., 2011). In relation to this aim, Bar-On (2006) developed a model of ESI that is directed towards the general goal of increasing EQ scores through the development of ESI competencies that promote emotionally appropriate and effective ways of acting and interacting in social situations (Kumar & Rose, 2008). These ESI competencies ultimately allow for greater reflection, reaction and understanding of environmental situations and emotional cues (Romanelli, Cain, & Smith, 2006) with those that score low in EQ primarily required to improve on their ESI competencies (Bar-On, 2006).

These skills, which teach individuals to utilize and manage emotions adaptively, can be taught through a variety of interventions (Trentacosta & Fine, 2010). One such movement-based intervention is Yoga, which is often incorrectly equated with mere physical exercise (Govindaraj, Karmani, Varambally, & Gangadhar, 2016). Stretching beyond the physical, Yoga aims towards mental, emotional and spiritual well-being; as a balanced and integrated practice improving cognitive function and emotional health in adults and children (Govindaraj et al., 2016; Narasimhan, Nagarathna, & Nagendra, 2011; Yeung, 2014).

In support of such claims, numerous studies reveal an association between Yoga, emotional health, well-being and the competencies of ESI (e.g. Gard, Noggle, Park, Vago, & Wilson, 2014; Hagen & Nayar, 2014; Ivtzan & Papantoniou, 2014; Khalsa & Butzer, 2016; Mallya & Anand, 2012; McCall, 2014; Tummers, 2009). However, although these connections are evident, there is a lack of *direct* focus on the relationship between Yoga and ESI as construct. Whilst a scattered multitude of studies exist on associations between Yoga

and various individual dimensions of ESI, extremely little literature appears to exist on the overall associations between Yoga and ESI as a whole. In response to this lack, the aim that was set for the study was to conduct a scoping review in an attempt to bring greater coherence to isolated and scattered literature. More specifically, in order to formally establish such an association, the study aims to review the scope of relevant academic research by offering a broad outline of the scope and thematic trends in the literature related to the association between Yoga and ESI skills in children and youth.

Chapter one gives a synopsis of the study, together with the introduction, problem statement and methods. Chapter two consists of the research article, which outlines the themes identified during the literature review and charts the data, and chapter three documents the conclusions, limitations and recommendations of the study.

1.2 Literature review.

1.2.1 Emotional-social intelligence.

A rapidly changing world of increasingly complex challenge exerts ever-growing pressure on individuals to develop the requisite social and emotional skills needed to deal with such pressures and challenges, with children and youth especially vulnerable to these demands (Gagen, 2015). As a result, a need exists to develop the skills and abilities that lead towards effective coping.

In particular, ESI enriching curriculums increase EQ scores with high EQ enhancing the adaptive coping mechanisms that promote effective coping through stressful situations (Viguer, Cantero, & Bañuls, 2017; Wang, Xie, & Cui, 2016). ESI, therefore represents one viable avenue towards improving the EQ scores that lead to more adaptive and effective coping skills. While numerous definitions exist, Bar-On's (2006) model comprehensively defines ESI as "an array of interrelated emotional and social competencies and skills that

determine how effectively individuals understand and express themselves, understand others and relate with them, and cope with daily demands, challenges and pressures” (Bar-On, 2010, p. 57).

In light this conceptualization, the following five main dimensions of ESI have been identified: (a) Intrapersonal – being aware of personal emotions, strengths and weaknesses together with an ability to express feelings; (b) Interpersonal – being able to recognise the emotions, feelings as well as needs of others so as to create and sustain positive relations; (c) Adaptability – being able to flexibly cope with everyday problems; (d) Stress management – the ability to adaptively cope with stressful situations, being able to manage emotions so as to derive benefit; and (e) General mood – having an inclination towards optimism and being able to express positive feelings (Bar-On, 2010; Di Fabio, Bernaud, & Loarer, 2014)

Furthermore, each dimension is associated with a specific set of subskills: The intrapersonal dimension is linked to the subskills of self-regard, self-awareness, assertiveness, independence and self-actualization; the interpersonal dimension with empathy, social responsibility and interpersonal relations; the adaptability dimension with reality-testing, flexibility and problem-solving; the stress management dimension with stress tolerance and impulse control; and the final dimension of general mood is associated with optimism and happiness (Bar-On, 2010).

These dimensions and their concomitant subskills have also been studied and found to be pertinent constructs not only among adults, but also among children and youth. Bar-On’s Emotional Quotient Inventory Youth Version Short Form [(EQ-i: YV (SF))] has specifically been developed to accurately assess, monitor and measure changes in ESI among youth, with thirty-items distributed between the aforesaid five main dimensions, with each of the five broad clusters measured by subscales that are summed to arrive at an overall EQ score (Bar-On, 2006; Parker et al., 2005; Bar-On & Parker, 2000)

Studies employing this and other related instruments have shown that among secondary school students, academically high performing students score higher in EQ related to the interpersonal, adaptability and stress management domains of ESI, with the intrapersonal skills of ESI increasing with age and through interventions (Parker et al., 2004). This study provides evidence that EQ scores can change and increase, with implemented school programs making a difference in terms of enhancing ESI related competencies (Parker, Saklofske, Wood, & Collin, 2009). Additionally, another study indicates that elementary school children that score above the group average in terms of academic achievement, score higher on the EQ scores that specifically relate to the interpersonal and adaptability domains of ESI (Wood, Parker, & Keefer, 2009). In particular, the academically gifted students between grade four and eight scored higher on adaptability, intrapersonal and stress management scales.

With these EQ scores increasing with age up to the fifth decade, it seems clear that programs aimed at improving ESI should be established to improve EQ scores (Wood et al., 2009) across various developmental stages. Specifically, these findings suggest that programs which assist in remedying EQ-related deficits could become vital platforms to teach ESI skills and competencies within school contexts (Chang, 2008). Such ESI development should ideally be cultivated during childhood when emotional and social expression is emerging, to predict more positive future outcomes in terms of EQ score (Chang, 2008; Leggett, Roaten, & Ybañez-Llorente, 2016; Orton, 1997; Vostanis, 2004). Learning to use emotions intelligently can predict a future of physical and psychological adaptation as well as health and well-being (Ruiz-Aranda et al., 2012). Likewise, higher EQ levels also support more effective coping styles and strategies to allow for better adaptation, outcomes and performance (MacCann, Fogarty, Zeidner, & Roberts, 2011; Por, Barriball, Fitzpatrick, &

Roberts, 2011). These coping mechanisms of EQ buffer against stressors, fostering stress resilience to adaptively enhance lifestyle (Romanelli et al., 2006; Schneider, Lyons, & Khazon, 2013), with EQ found to be positively associated with both effective problem-solving and adaptive coping styles (Noorbakhsh, Besharat, & Zarei, 2010; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012).

Linked to this, positive correlations have been reported between EQ and adaptive skills in studies with school pupils; with adolescents that score high in EQ using a wide range of adaptive coping mechanisms to flexibly deal with social challenges and demands (Brackett & Katulak, 2007; Brackett, Rivers, & Salovey, 2011; Zeidner, Matthews, & Roberts, 2012). Such adaptive coping, which is the ability to survive by flexibly navigating through everyday problems, is ultimately associated with well-being as well as various positive life outcomes (Ruiz-Aranda et al., 2012).

In addition to the relationship that exists between EQ and coping, higher levels of EQ have also been found to predict better academic performance and achievement (Ganpat, Dash, & Ramarao, 2014; MacCann et al., 2011). An existing research base so too connects EQ to mental health, well-being, and reduced stress (Por et al., 2011), as well as to the socio-emotional skills that lead to positive development (Castillo, Salguero, Fernández-Berrocal, & Balluerka, 2013; Ruiz-Aranda et al., 2012). Overall then, existing research indicates that increasing EQ scores through developing the competencies of ESI will likely result in a myriad of beneficial outcomes in terms of psychological, social and physical well-being; heightening states of self-esteem and life-satisfaction; promoting social relations and achievement; and underwriting academic success (Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013; Hogan et al., 2010).

Relative to this, an empirical study based on Bar-On's (2006) model of ESI revealed a significant relationship between developing ESI, physical health, and optimism in a group of adolescents. Within this group of high school students, a statistically significant relationship was found between ESI and scholastic performance, with ESI-enriching curriculums shown to significantly increase EQ in seventh graders over the period of a year. These children became progressively better at understanding themselves and others, expressing themselves and relating to others, managing and controlling their emotions as well as adapting to their immediate school environment. Furthermore, among primary-school children, such development of ESI has been found to promote pro-social behaviour and to prevent anti-social behaviour, and ESI levels have been found to differentiate those who are adjusted from those who are maladjusted (Mavroveli, Petrides, Shove, & Whitehead, 2008). Most importantly, among children, these and other findings clearly reveal that the skills and competencies associated with emotionally intelligent behaviour can be actively developed through education and training (Bar-On, 2010). Considering the benefits of developing ESI to improve EQ, and bearing in mind that EQ further supports these ESI competencies, nurturing these aptitudes through interventions will likely result in the same positive outcomes as those mentioned above.

Taking the above studies into consideration, it is evident that the factors of ESI are teachable and learnable with such factors capable of being improved over a relatively short period of time, through simple didactic methods (Bar-On, 2006). This closely corresponds to other research on EQ's capacity as a developable trait that can be learnt, taught and developed over time through the acquisition of ESI skills (Bar-On, 2006; Bar-On, 2010; Goleman, 1996). Programs that nurture these ESI skills towards increasing EQ thereby encourage the strength-based perspective of Positive Youth Development (PYD) (Lerner, Almerigi, Theokas, & Lerner, 2005).

1.2.2 Positive youth development.

PYD, as a strength-based perspective, is based on the “Five Cs” of “competence, confidence, character, social connection, and caring or compassion” (Lerner, Dowling, & Anderson, 2003, p. 175; Lerner et al., 2005) with the “sixth C” being one’s contribution in terms of community. According to these “Five C’s”, competence, character, and confidence relate to the intrapersonal dimension of Bar-On’s (2006) model, with connection and caring (or compassion) relating to the interpersonal dimension.

PYD results from guidelines that assist in adapting development, leading towards healthier outcomes of growth, well-being and thriving (Lerner et al., 2003; Lerner et al., 2005). PYD is ultimately based on the premise that every young individual has the latent capacity for success, as well as health and positive development (Lerner et al., 2005). More specifically, PYD emphasises primary prevention for strength development and competency creation, in comparison to secondary and tertiary prevention strategies that treat pathology (Lerner et al., 2005). This is grounded in the positive psychology notion of “building-what’s-strong” as opposed to the traditional psychology concept of “fixing-what’s-wrong” (Duckworth, Steen, & Seligman, 2005). Consequently, as a means of building onto strengths and existing developmental capacities and resources, Social and Emotional Learning (SEL) programs are frequently implemented for PYD.

1.2.3 Social and emotional learning.

SEL has become an overarching term for programs that foster PYD to promote emotional and social skills as well as behaviour, with these programs taking on a variety of forms (Berg et al., 2017). Such programs aim to include the twenty-first century skills of problem-solving, reasoning, self-direction, creativity, innovation, flexibility, adaptability, leadership,

accountability and responsibility. These twenty-first century skills already conform to many of the subskills mentioned in Bar-On's (2006) model of ESI.

These SEL programs have been shown to enhance adaptive functioning, personal strengths and PYD within educational contexts (Abrahams et al., 2019). SEL programs are typically comprised of a basic structure that incorporates the various ESI elements that are central to social and emotional development (Shek, Sun, & Merrick, 2012). In this regard, the learning competencies of these SEL programs include Bar-On's (2006) ESI subskills of responsibility, self-awareness, assertiveness, empathy, intra as well as interpersonal growth, problem-solving, impulse control, and stress-management (Abrahams et al., 2019). Studies have repeatedly shown that these emotional-social competencies can be taught through SEL programs, to improve academic performance and social behaviour, while reducing emotional distress and conduct problems (Newman & Dusenbury, 2015). Two decades of scientific research indicate that high-quality, well-implemented SEL programs are academically, socially and emotionally beneficial with a growing evidence base supporting the effectiveness of these SEL programs (Khalsa & Butzer, 2016; Weissberg & Cascarino, 2013).

Of importance to the present study is the fact that these researched SEL programs demonstrate numerous similarities to Yoga interventions, as subsequently discussed. Yoga interventions demonstrate therapeutic benefit across all age groups, to specifically improve the physical, behavioural, mental and emotional competencies of children and adolescents (Bubela & Gaylord, 2014; Khalsa & Butzer, 2016). Yoga interventions also satisfy the three core attributes of school-based SEL programs, namely physical fitness, mind-body awareness, and self-regulation (Khalsa & Butzer, 2016). Conversely, these SEL programs also share common components with Yoga interventions such as sequenced training, active learning, an emphasis on skill development, and well-defined program intentions (Khalsa & Butzer, 2016). As is the case with Yoga, these SEL programs are also comprehensive, make

use of various methodologies, develop skills by way of active practice as well as reinforcement and extend into classroom routines (Khalsa & Butzer, 2016).

Such parallels suggest that Yoga could most likely be integrated into the development of future SEL programs. Thus, elements of Yoga could be of significant value when incorporated into SEL modules and programs, especially within schools that specifically advocate holistic education and development (Khalsa & Butzer, 2016).

1.2.4 Yoga.

In contrast to the dominant modern pursuit of economic and material gain, the practice of Yoga aims toward self-realization, union, and harmony (Taneja, 2014). From the word ‘*yuj*’, meaning to yoke or unite with the self or supreme, Yoga’s ultimate intention is towards self-knowledge on the path to becoming a wise Yogi or Yogini (Sharma, 2012). As an ancient practice with Indian origins in excess of four thousand years, Yoga is comprised of a system of multifaceted physical, social, mental, spiritual, moral and global features in pursuit of reaching self-awareness (Impett, Daubenmier, & Hirschman, 2006; Taneja, 2014; Tummers, 2009). Such a holistic system focuses on the characteristics of health, balance and well-being, not just physically but also mentally, emotionally and cognitively; having demonstrated efficacy for both adults and children in this regard (Gard et al., 2014; Khalsa & Butzer, 2016; Mallya & Anand, 2012; Tummers, 2009).

Traditionally, Yoga was conceptualised as having six main branches, which include Raja, Karma, Bhakti, Jnana, Tantra and Hatha Yoga (Ponder & Holladay, 2013). Raja (also referred to as Royal or Ashtanga) Yoga is a comprehensive eightfold path consisting of eight limbs or components, which in differing combinations serve as the foundation for the other branches (Mishra, Singh, Bunch, & Zhang, 2012). The first four limbs represent external practices with the ‘*Yamas*’ as moral restraints or codes, the ‘*Niyamas*’ as observances for self-purification, ‘*Asana*’ as physical postures, and ‘*Pranayama*’ for breath control. The last

four limbs exemplify internal practices with '*Pratyahara*' for sense control, '*Dharana*' for focused concentration, '*Dhyana*' as meditation and '*Samadhi*' as enlightenment or pure consciousness (Mishra et al., 2012; Ponder & Holladay, 2013).

With such diversity, these exercises, practices and techniques can synergistically be combined to offer a unique, tailor-made practice (Gard et al., 2014; Khalsa & Butzer, 2016). A combination of the first four limbs underpin most modern practices of Yoga, with those practicing for a purpose beyond that of physical fitness, placing Yoga in the broader context of Raja Yoga (Gard et al., 2014). In an effort to professionalize and institutionalize Yoga in the West, the practice has, however, been confined to physical postures and breath control, with a corresponding emphasis on experimental research of the practical and physical health benefits of Yoga (Newcombe, 2009; Smith, Greer, Sheets, & Watson, 2011).

Subsequently, such physicality became interwoven in the modern Yoga practice, with research in the first thirty-years focused predominantly on the physical conditions of metabolism, asthma, hypertension and the like (McCall, 2014; Sarbacker, 2014). More recently, Yoga has captured the scientific community's attention for its cognitive and emotional benefits (Ferreira-Vorkapic et al., 2015; Khalsa, 2013; Ross & Thomas, 2010; Serwacki & Cook-Cottone, 2012). Over the past few decades, such a shift in research increasingly documents the psychological benefits of Yoga, indicating its value in enhancing positive psychological functioning and emotional well-being (Hagen & Nayar, 2014; Ivtzan & Papantoniou, 2014; Mallya & Anand, 2012; McCall, 2014). Additionally, Yoga is increasingly used as a complementary tool in improving well-being through stress reducing and management (Centeio, Whalen, Thomas, Kulik, & McCaughtry, 2017; Gard et al., 2014; Riley & Park, 2015).

Whilst not often explicitly researched in the context of ESI, Yoga nonetheless appears to be linked to many of the positive outcomes that are closely associated with these

competencies. The Bar-On (2006) model of ESI (as previously discussed) provides a useful framework of five main domains of ESI which can be used to elucidate the relationship between Yoga and ESI. These five main ESI domains and their associated minor subskills will subsequently be discussed in terms of how they relate to Yoga.

1.2.4.1 Yoga and the subskills of the intrapersonal domain.

Self-awareness is a subskill associated with the interpersonal domain and is defined as an ability to be aware of and understand oneself and one's emotions (Bar-On, 2006). Through the cultivation of the intrapersonal dimensions of self-awareness, personal transformation occurs and extends to other areas of functioning such as improved social interaction and self-regulation; promoting life satisfaction as well as PYD (Kishida et al., 2018; Palgi, 2007; Park, 2004). Yoga demonstrates benefit in terms of self-awareness by shifting children's attention inward towards internal cues and emotions (Hagen & Nayar, 2014).

Parallel to this, Pandya (2018) indicates that Yoga facilitates emotional awareness that promotes a deeper connection to self and others, increasing well-being and inducing a happier state of mind. These improvements in self-awareness increase internal state awareness as well as positive self-regard among children and adolescents; with studies of Yoga in schools reporting positive outcomes in terms of self-awareness, self-esteem and self-image (Galantino, Galbavy, & Quinn, 2008; Hagen & Nayar, 2014; Khalsa & Butzer, 2016; Palgi, 2007; Vallejos et al., 2016). Additionally, Kishida, Mama, Larkey and Elavsky (2018) indicate that Yoga induced self-awareness leads to positive intrapersonal change, increasing self-care, and enriching one's relationship with oneself. Likewise, this shift in attention assists in counteracting the negative influences of modern-day society and culture, curbing the adverse effects of media bombardment (Kishida et al., 2018).

According to Bar-On (2006) the intrapersonal subskill of self-regard is the ability to accept, perceive and understand oneself in an accurate manner. Higher states of self-esteem

are associated with increased problem-focussed coping and adaptability, which in turn decreases stress and allows for the more active participation in interpersonal relations (Thoits, 2013; Yoon, Kim, & Kim, 2011). Hand in hand with this, positive self-esteem predicts resilient functioning and adaptive coping mechanisms in maltreated children (Cicchetti & Rogosch, 2009). School-based Yoga programs have been found to increase self-esteem, with such positive self-regard contributing to the enhanced quality of life in youth (Butzer, Bury, Telles, & Khalsa, 2016; Jozefiak et al., 2017).

The intrapersonal competency of independence is defined by Bar-On (2006) as the capacity to be self-reliant and emotionally free from being dependent on others. Such a subskill predominantly relies on the successful navigation of the developmental stages associated with childhood and adolescence, with older youth typically exhibiting greater levels of independence in relation to critical-thinking, social action and responsibility (Wagaman, 2011). This corresponds to Erikson's identity versus role confusion stage which occurs between the ages of twelve and eighteen and involves the development of identity and independence (Glowiak & Mayfield, 2016b; Vostanis, 2004). In line with such development, Yoga improves independence by cultivating an experience of self-efficacy and personal competency, also assisting disabled children in regaining their independence through an increase in bodily awareness (Cook-Cottone, Giambrone, & Klein, 2018; Das, Deepeshwar, Subramanya, & Manjunath, 2016; Garg et al., 2013; Goldberg, 2013).

The intrapersonal competency of assertiveness is described as an ability to express one's emotions in an effective and constructive way (Bar-On, 2006). In relation to this subskill, Yoga programs for sexually abused children have resulted in increased states of assertiveness (Lilly & Hedlund, 2010). However, very little literature appears to exist that deals with Yoga's association with assertiveness. However, this absence of research might be reflective of Yoga's preference for humility over assertiveness (Iyengar, 2007).

Finally, Bar-On (2006) describes the intrapersonal subskill of self-actualisation as the motivation to achieve one's full potential through personal goal achievement. According to the preliminary investigation of the literature, no connections were found between Yoga and the subskill of self-actualisation. Such a lack in the literature could be owing to Yoga's traditional emphasis on self-realisation as a continuous state of self-discovery, as opposed to self-actualisation as an ultimate state of achieving one's highest potential (Ivtzan, 2008; Paranjpe, 1996; Ryff, 2014).

1.2.4.2 Yoga and the subskills of the interpersonal domain.

Secondly, regarding the interpersonal domain, the subskill of empathy is defined by Bar-On (2006) as the awareness and understanding of how others feel. Such empathy is, however, dependent on an individual's stage of development, with empathy only emerging between the ages of seven and eleven, during what Piaget described as the concrete operations stage which spans the majority of middle childhood (Glowiak & Mayfield, 2016a; Orton, 1997). Such empathy is a determinant of pro-social conduct, with empathy development leading to greater prosocial behaviour (McMahon, Wernsman, & Parnes, 2006). Yoga interventions increase empathy in school children through the cultivation of self-awareness, social cohesion and interpersonal relations (Acosta & Hall; 2018; Khalsa & Butzer, 2016).

In relation to the subskill of interpersonal relations, Bar-On (2006) described such a skill as the ability to relate well with others and establish relationships that are mutually satisfying. Interpersonal relations, connectedness, and social support have been shown to buffer the risk of suicide in youth as well as the harsh effects of stress (Arango, Opperman, Gipson, & King, 2016; Rosario, Salzinger, Feldman, & Ng-Mak, 2008). In particular, the quality of these social relations surpasses the quantity of these connections to positively influence the subjective well-being or happiness of youth (Park, 2004). Relative to this, the literature

highlights the numerous social benefits of Yoga in children, to include improvements in social well-being, social interactions, life skills, social self-esteem, prosocial conduct and social responsibility (Bhardwaj, Singh, Balkrishna, & Telles, 2017; Folleto, Pereira, & Valentini, 2016; Khalsa & Butzer, 2016; Tummers, 2009). These prosocial competencies are developmentally dependent and begin to emerge from middle childhood, leading towards more constructive interpersonal relations, social adjustments and morality (McMahon et al., 2006; Park, 2004; Scott & Saginak, 2016; Vostanis, 2004).

With regard to the interpersonal competency of social responsibility, Bar-On (2006) defines this subskill as the capacity to identify with a social group and collaborate with others. From the subskill of empathy, self/other awareness develops into prosocial behaviour which indirectly manifests as social responsibility (Wagaman, 2011). In relation to this competency, Yoga has been found to be associated with development of empathy and self-awareness which leads to self-care, self-adjustment, ownership and self-responsibility, with the potential to manifest as responsible citizenship (Khalsa & Butzer, 2016; Tummers, 2009).

1.2.4.3 Yoga and the subskills of the stress management domain.

The stress management subskill of stress tolerance is defined by Bar-On (2006) as the effective and constructive management of emotions. Stress is frequently reported in children and youth, with those that lack proficiency in coping with such stress, presenting with more emotional, social, health-related and behavioural problems (Kraag, Zeegers, Kok, Hosman, & Abu-Saad, 2006).

In particular, Yoga interventions successfully promote emotionally adaptive stress-related reactions and coping mechanisms (Bergen-Cico, Razza, & Timmins, 2015). Studies of Yoga in elementary schools have shown improvements regarding stress-coping abilities, resilience as well as stress management among pupils involved in Yoga-related interventions or practices (Khalsa, Hickey-Schultz, Cohen, Steiner, & Cope, 2012). The slow rhythmic

breathing practices of Yoga, together with techniques of relaxation, elicit states of well-being, serenity, mental focus and stress tolerance to minimise rumination, anxiety and stress (Kinser, Goehler, & Taylor, 2012; Weaver & Darragh, 2015). These relaxation techniques in turn support the development of children's internal resources to allow them to manage their external difficulties more effectively (Palgi, 2007). According to Riley and Park (2015), relaxation at the end of a Yoga practice incorporates '*Shavasana*' or the Corpse pose, which inhibits activity within the posterior section of the hypothalamus and decreases salivary cortisol levels to reduce blood pressure and lower stress.

The stress management competency of impulse control is defined by Bar-On (2006) as the effective and constructive control of emotions. Impulse control is associated with interpersonal success, with high levels of self-control linked to enhanced interpersonal skills, satisfying relations and secure attachments (Blackhart, Nelson, Winter, & Rockney, 2011). Such impulse control leads to greater adaptability through a capacity to adjust emotion and behaviour according to changing situations (Parker et al., 2004). In addition to this, self-esteem, emotional regulation and adaptability have been found to support coping and stress management (Cicchetti & Rogosch, 2009). In this same way, Yoga alleviates stress in young people by promoting emotional resilience, stress coping abilities as well as increased inhibitory and impulse control; with studies of Yoga in schools reporting positive outcomes in terms of self-regulation (Hagen & Nayar, 2014; Khalsa et al., 2012; Khalsa & Butzer, 2016; Luu & Hall, 2016). In this regard, Yoga programs promote the development of self-regulatory and impulse control skills in children and adolescents, enhancing coping abilities as well as reducing stress and aggression (Palgi, 2007; Weaver & Darragh, 2015).

1.2.4.4 Yoga and the subskills of the adaptability domain.

Fourthly, the problem-solving competency of the adaptability domain is defined by Bar-On (2006) as the ability to solve personal and interpersonal problems effectively.

Regarding this, Yoga promotes emotionally adaptive responses to improve problem-solving skills in children and preadolescents (Bergen-Cico et al., 2015; Khalsa & Butzer, 2016; Pandit & Satish, 2014). However, a limited amount of literature was preliminarily found to connect such a competency to Yoga.

In addition to this, the reality-testing competency is described by Bar-On (2006) as an ability to objectively validate personal thought and feeling with external reality. At this preliminary stage, no literature was found that linked Yoga to the competency of reality-testing.

Regarding the flexibility competency of adaptability, Bar-On (2006) defines this subskill as the ability to adapt and adjust thoughts and feelings according to new situations. However, an initial review of the literature was unsuccessful at locating studies reporting on the potential connection between Yoga and (non-physical) flexibility.

1.2.4.5 Yoga and the subskills of the general mood domain.

Finally, Bar-On (2006) defines the optimism competency of the general mood domain as an ability to have a positive outlook on life. Yoga is associated with enhanced mood, increased optimism, and positive affect (Miller et al., 2014). Such positive coping, affect and mood are further enhanced by the non-competitive nature of Yoga (Pandya, 2018). Likewise, Yoga cultivates positive attitudinal change, allowing individuals to view life and stress in more optimistic ways (Riley & Park, 2015). Such optimism subsequently results in the experience of more positive emotions according to Fredrickson's broaden-and-build theory (Hoyt, Chase-Lansdale, McDade, & Adam, 2012; Pandya, 2018).

The happiness competency of the general mood domain is defined by Bar-On (2006) as the capacity to feel satisfied with life, self and others. According to Park (2004), positive affect acts as a buffer against the negative impact of stressful life events. Relative to this,

individuals who are happy with their lives tend to be better problem solvers, have thriving social relations and more resistance to stress. In relation to these competencies, Yoga has been found to enhance overall mood, positive emotion and well-being, with studies of Yoga in schools reporting positive outcomes and improvements in terms of happiness, mood states, relaxation and optimism (Khalsa et al., 2012; Khalsa & Butzer, 2016; Vallejos et al., 2016). Yoga induces positive affect through a reduction in cortisol and corresponding stress levels (Riley & Park, 2015). Happiness and positive emotions have also been shown to diminish stress by reducing activation in the hypothalamic-pituitary-adrenal (HPA) axis (Hoyt et al., 2012). On the same note, according to neuropsychological evidence, and Fredrickson's broaden-and-build theory, positive affect is linked to patterns of thought that are expansive, creative and flexible; to further increase dopamine levels and induce more positive affect. Through the mechanisms described by the Broaden-and-build theory, as well as neuropsychological mechanisms, positive affect generates further positive affect to increase these benefits (Hoyt et al., 2012).

Taking the above into consideration, Yoga is clearly associated with various competencies and skills related to ESI (Ganpat et al., 2014; Ganpat & Nagendra, 2011; Kumari & Sahu, 2018). However, as will be argued more comprehensively in the next section, these research findings remain fairly scattered across disciplines and various academic sub-fields, and results are often not explicitly contextualized within the constructs of ESI. As such, a scoping review seems vital in piecing together research for future progress in the field.

Considering the above, the scoping review aims to provide deeper theoretical knowledge on the association between Yoga and the ESI dimensions and subskills of Bar-On's (2006) model, in children and youth. Secondly, it aims to provide insight into the mechanisms that translate these theoretical underpinnings into a Yoga practice for SEL programs in children and youth. The current scoping review ultimately serves to ignite an academic conversation

about Yoga's connection to ESI, as well as the practical applications that stem from this relation. However, before outlining the methodology that was followed for the purpose of the review, it is first necessary to elucidate terms such as child and youth, and to provide a brief overview of salient developmental perspectives, in order to contextualise the review.

1.2.5 A developmental perspective.

According to one international definition, a child is younger than eighteen years, an adolescent is between ten and nineteen years, a teenager is between thirteen and nineteen years; young people are between ten and twenty-four years, and youth are between fifteen and twenty-four years (Sawyer et al., 2012). Young people are further categorised into early adolescence from ten to fourteen, late adolescence from fifteen to nineteen and young adulthood from twenty to twenty-four years of age. In the context of the present study, the review included studies that reported findings in relation to the relationship between Yoga and ESI related factors among children and youth between the ages of seven and twenty-four.

Situating the study of ESI and Yoga in the context of children and youth, Jean Piaget's theory of cognitive development as well as Erik Erikson's psychosocial development theory will be considered (Glowiak & Mayfield, 2016a; Leggett et al., 2016; Orton, 1997). The scoping review will integrate the developmental stages from the age of seven to the age of twenty-four, with infancy and early childhood, largely characterised by motor development, attachment, bonding, expression and play, being excluded (Glowiak & Mayfield, 2016a; Leggett et al., 2016; Orton, 1997).

Regarding Piaget's model, the concrete operations stage of middle childhood, from the age of seven until eleven, demonstrates an increasing awareness of abstracts such as number, mass and internal emotional state as well as the development of empathy, self-efficacy, logical reasoning and emotional self-regulation (Glowiak & Mayfield, 2016a; Glowiak &

Mayfield, 2016b; Orton, 1997). With a range of complex developing emotions, middle childhood is characterised by emerging prosocial behaviours and the mastery to regulate, negotiate and manage emotion (Glowiak & Mayfield, 2016b; Vostanis, 2004). In terms of Erikson's stage of industry versus inferiority, talents and abilities are developed, and competence is achieved between the age of six and twelve (Glowiak & Mayfield, 2016a; Orton, 1997).

Further progress is achieved during adolescence through milestones of emotional recognition and perspective taking (Schwenck, et al., 2014). Considering Piaget's formal operations stage of adolescence from the age of eleven to fifteen, development occurs in terms of abstract thought, logical reasoning, cognitive flexibility as well as greater levels of empathy (Glowiak & Mayfield, 2016a; Hicks & Flamez, 2016; Orton, 1997).

Correspondingly, Erikson's identity versus role confusion stage between the age of twelve and eighteen alludes to identity development, self-acceptance and independence (Glowiak & Mayfield, 2016b; Orton, 1997). In addition to this, adolescence is also characterised by a refined ability to regulate emotion by means of greater emotional literacy and the utilisation of coping skills in times of distress (Glowiak & Mayfield, 2016b; Vostanis, 2004). These developmental stages will be kept in mind when reviewing the literature to contextualise the study in terms of children and adolescence.

In this manner, developmental models act as a guideline for understanding and promoting children and adolescent's motor, cognitive, social as well as emotional development. These stage-based models suggest that developmental interventions would ideally need to first consider the specific stages of youth development, with a different focus at each grade level (Sullivan, Sutherland, Farrell, & Taylor, 2015). Interventions that focus on the early grades could for example focus on impulse control and for the later grades on prosocial skills (Sullivan et al., 2015). In turn, Yoga interventions would also need to take heed of these

stages of child development, also considering Tummers's (2009) comprehensive table of developmental and grade appropriate Yoga.

According to Tummers (2009) it is imperative to structure educational Yoga programs in line with the aforesaid developmental milestones taking cognitive, movement and affective benchmarks into consideration. Firstly, the primary focus of preschool Yoga is on motor skill development. Yoga up to grade two places emphasis on fine motor skills, coordination, body control as well as the psychosocial skills of co-operation and responsibility. From grade three to five the focus is on fundamental movement skills, sequencing, rhythm, respect, cooperation, openness, dealing with conflict, understanding the point of view of others as well as self-care. From grade six to eight prominence is placed on correct body mechanics, posture, physical development, positive socialization, cooperation, communication, responsibility, respect and self-awareness. Lastly, Yoga from grade nine to twelve should retain a focus on form, self-awareness, responsibility and reflection towards stress management, positive social interaction, conflict resolution as well as ethical behaviour.

In the context of promoting ESI through SEL programs focused on Yoga, interventions should be viewed as developmental processes en route to enhancing existing strengths and skills in children and youth (Newman & Dusenbury, 2015; Ryff, 2014).

1.3 Problem statement.

1.3.1 Rationale for the study.

The twenty-first century is characterized by rapid change, technological development, unpredictability and complexity, where novel threats are posed to the well-being and optimal functioning of individuals (Di Fabio & Kenny, 2018; Jakupov, Altayev, Slanbekova, Shormanbayeva, & Tolegenova, 2014). Escalating social, cognitive and emotional demands often exceed an individual's internal assets, which produces stress, and necessitates the

cultivation of skills required to support coping and adaptation (Jakupov et al., 2014). In this manner, contemporary citizens need to be able to Transform, Adapt, Cope and Develop (TACD) in accordance with modernity, with ESI competencies that increase EQ potentially guiding the way (Ruderman, Clerkin, & Connolly, 2014).

Such competencies become essential in a world where individuals are increasingly judged based on their capacity for insight, composure, self-regulation and social as well as emotional literacy (Gagen, 2015). There is consequently a resulting demand for children and youth to leave education with emotional and social competencies already in place. With these affective and social skills in greater demand, pupils need to be taught the necessary skills that lead to the growth of such competencies (Gagen, 2015). Subsequently, social and emotional transformation and development is required for all individuals, but more prominently for children and youth, with schools welcoming emotional education as an essential element in the training of future citizens (Gagen, 2015; Illeris, 2014).

A large body of research is present on the benefits of developing ESI to improve EQ, and an increasing amount of literature associates Yoga with the competencies of ESI and well-being. A gap therefore exists in terms of synthesising these findings in order to gain a better understanding of the direct associations between Yoga, ESI and EQ among children and youth. Curbing the potential progress towards such an integrative overview, is the fact that the research remains dispersed across disciplines, and therefore unintegrated, which hampers attempts to obtain a broad overview of the empirical associations that have been found to exist between these phenomena. In addition to being dispersed, the research pertaining to Yoga is not only very extensive, but also spans across various scientific disciplines and domains from the medical to psychological, school to workplace and secular to spiritual (Bonura & Tenenbaum, 2014; Douglass, 2010; Hartfiel et al., 2012; Stephens, 2017; Varambally & Gangadhar, 2012; White, 2012).

Consequently, the collation and synthesis of the existing scientific literature is required to obtain a more comprehensive understanding of the relationship between ESI and Yoga, specifically among children and youth. A comprehensive and consolidated record as well as scientifically established connection could in turn assist researchers to identify the gaps, themes, topics, dimensions or components in need of greater research. As the aim of a scoping review is to map a field of study to expose evidence gaps and explore relationships, such a broad outline could play a significant role in laying a foundation for more focused studies and specialized systematic reviews (Sarrami-Foroushani, Travaglia, Debono, Clay-Williams, & Braithwaite, 2015).

In this way, a scoping review could potentially guide and facilitate future, more focused, research and intervention studies. In addition to future research, appropriate recommendations regarding future practice and policy can be made. This scoping review could ultimately be of value to therapists, educators and Yoga teachers who work directly with children and youth, offering possible reform and progress in the field.

1.3.2 Aim of the study.

In response to the abovementioned gaps, the aim of the study is to conduct a scoping review of the association between Yoga, ESI and EQ (as conceptualized in Bar-On's (2006) model of ESI), specifically among children and youth. This will be achieved by collecting, categorizing, summarizing and synthesizing the literature pertaining to Yoga and ESI in children and youth.

1.4 Research questions.

1.4.1 Primary research question.

What is the association between Yoga, ESI and EQ among children and youth, within a milieu of PYD and SEL programs?

1.4.2 Primary research objective.

To conduct a scoping review of existing literature on the association between Yoga, ESI and EQ among children and youth, within a milieu of PYD and SEL programs.

1.5 Methodology.

1.5.1 Research design.

As previously suggested, the literature pertaining to Yoga and its contribution towards ESI remains dispersed and unintegrated, spanning across various scientific disciplines and domains. A scoping review thus becomes a well-suited methodology in such cases, where the need exists to integrate a broad set of existing research findings and explore the diversity of available literature, which varies by method and is distributed across disciplines (Levac, Colquhoun, & O'Brien, 2010).

The purpose of the scoping review is to explore the possible breadth of what is available in terms of evidence and as such, the selection, collection and summarizing of such literature can lead to a more integrated compilation of findings to guide future research (Levac et al., 2010; Tricco et al., 2016). The agenda of the scoping review is to inform future research, policy and practice (Levac et al., 2010). As such, a scoping review attempts to offer an initial assessment of the pre-existing literature, examining the variety, amount, as well as nature of research activity (Levac et al., 2010). In the process, such an initial assessment aims to refine and supplement successive research studies through the identification of literature gaps, themes, types and maps that relate to inductive reasoning through an exploratory research question (Levac et al., 2010).

In order to address the exploratory research question that guides this study, PRISMA guidelines will be adopted to assist in the standardisation of reporting. In outlining these guidelines, Arksey and O'Malley (2005) identify six stages of which five are relevant to the

proposed scoping review. The five relevant stages include: (1) the identification of a research question, (2) the identification of relevant studies, (3) the selection of studies, (4) data charting, as well as (5) the collation, summarisation and reporting of the results. The sixth stage, which is optional, and typically not included in the context of scoping reviews, involves the validation of research findings by means of consulting with stakeholders (Levac et al., 2010).

It is important to note that such a process of knowledge synthesis is not necessarily directly linear, with the five proposed stages interchangeable in pursuit of extensive inclusion and comprehensive literature coverage (Arksey & O'Malley, 2005; Levac et al., 2010). The need for such flexibility was therefore taken into consideration throughout the research process.

1.5.2 Sampling.

Having already identified a research question as part of stage one, stage two involves identifying relevant studies in electronic databases, scientific journals and reference lists (Arksey & O'Malley, 2005). The inclusion criteria for this specific scoping review included literature published in the English language, across all disciplines, in the format of a peer-reviewed article that is available via open access. The literature was further refined to include study populations of children or youth, between the ages of seven and twenty-four. Articles were extracted starting from the year 1995, when EQ experienced a resurgence in the academic world through Goleman's (1995) best-selling book entitled "Emotional Intelligence".

The two databases that were chosen included Scopus and Web of Science and provided a broad scope and copious amount of literature. When searching for relevant literature, grey literature in the form of unpublished reports or material (Tricco et al., 2016), were excluded from the scoping review. In conjunction to this, books were excluded from the scoping

review as were all editorials, reviews, letters, poster and meeting abstracts, proceeding papers, formative research, corrections, citations as well as combined interventions. Such material and grey literature, lacks the comprehensive structure that allows for more complete analysis, with such material lacking in scientific peer-review and possibly being of a lower quality and containing unreliable findings (Batt, Fox-Rushby, & Castillo-Riquelme, 2004; Birnbaum, Daily, O'Rourke, & Loretto, 2015). For this reason, grey literature was excluded in favour of focussing only on findings derived from academic, scientific and peer-reviewed research.

1.5.3 Keywords.

Existing research has been found to examine the associations between Yoga and the individual components of Bar-On's (2006) ESI model. As such, a set of keywords have been generated in pursuit of identifying data that reports findings on the relationship between Yoga, the specific dimensions of ESI (as conceptualized by Bar-On (2006)), and children and youth. As part of the search strategy, key terms are identified in accordance with the review question, with keywords specifically identified to accumulate an extensive list of potentially relevant sources from the databases (Aromataris & Riitano, 2014; Matthew-Maich et al., 2016).

Keywords will be identified and categorised in a similar manner to the work done by Snyder, Crooks, Johnston, and Kingsbury (2011) and in accordance with the approach proposed by Aromataris and Riitano (2014) who suggest the identification of three groups of keywords based on the 'what', 'why' and 'who' of the review (see Table 1). According to such grouping, the 'what' category includes Yoga. The 'why' category is reflected in the following keywords: intrapersonal, self-regard, self-awareness, assertiveness, independence, self-actualisation, interpersonal, empathy, social responsibility, interpersonal relations, stress

management, stress tolerance, impulse control, adaptability, problem-solving, general mood, optimism and happiness.

Combinations and permutations of these keywords were also employed to ensure that no important sources were overlooked. The ‘who’ category included the keywords, child and youth. Terms from the distinct categories of keywords were searched for in the academic databases using Boolean operators such as “AND” and “OR” (Aromataris & Riitano, 2014) in order to accommodate the various combinations and variations of keywords. Such Boolean operators ensured that all phrases and sources were accounted for, offering systematic rigor and inclusion (refer to Table 1 for a comprehensive list of keywords used).

Table 1

Keyword Table

“WHAT” Keywords: Yoga
“WHY” Keywords: “Intrapersonal”: Emotional, psychological, mental “Self-regard”: Self-esteem, self-confidence, self-worth “Self-awareness”: Self-aware*, mindful* “Assertiveness”: Assertive*, self-assured, determined* “Independence”: Independent*, autonomy, self-determination, self-reliance “Self-actualization” “Interpersonal”: Social* “Empathy”: Empathy*, compassion, sympathy “Social responsibility” “Interpersonal relations: Interpersonal relation*, social relation* “Stress management”: Stress manage*, stress regulate*, stress control* “Stress tolerance”: Stress tolerance*, stress resilience*, stress resist* “Impulse control: Impulse manage*, impulse regulate* “Adaptability”: Adapt*, flexible*, versatile* “Reality-testing” “Flexibility” “Problem-solving”: Problem solve*, rational, systematic “General mood”: Temperament, disposition “Optimism”: Optimism*, enthusiasm*, positive* “Happiness”: Happiness*, joy*, content*
“WHO” Keywords: Child*, youth*

1.5.4 Data collection.

From the primary selected studies gathered from the sampling of relevant keywords, the reviewed literature was then sorted as well as charted in relation to key concepts, themes and items, as was recommended by Arksey and O'Malley (2005). Such categorized information was then recorded in the database program of Excel and appears in a simplified format as a Data Charting Table (see Appendix A), with such a form plotting both general and specific information related to each identified source. The Data Charting Table plotted such information according to the extracted data patterns and thematically mapped these outcomes relative to the publication year, sample size, race, average age, gender, condition, school level, country, facility type, setting, Yoga style, methodology, sessions, duration, ESI dimensions, results, core techniques and well-being domain. Using a descriptive-analytical method, all primary research was analysed according to a common framework (Arksey & O'Malley, 2005).

Such a common framework supports the collection of standardized information across all primary studies. As such, charting the data using this method eliminates the quality appraisal of primary data in favour of describing and narrating the full breadth of research findings (Arksey & O'Malley, 2005). In this way, these categories provide an extensive overview, map or summary of the collected data to enable the effortless identification of research gaps for future studies and reviews.

1.5.5 Thematic analysis.

The fifth stage of the scoping review involved the collation, summarization and reporting of results, with thematic analysis at the forefront (Arksey & O'Malley, 2005). In the context of using an exploratory qualitative research design, such an analysis aimed at providing a map of the discrepancies and similarities within the data set. These discrepancies and

similarities were reported as patterns, with the common threads and themes consistent with the overall research question (Vaismoradi, Turunen, & Bondas, 2013). This analytical process began when patterns of meaning and issues of interest were noticed in the previous stage of data collection and were followed by the more distinct analytical stages specified by Braun and Clark (2006).

These distinct analytical phases of thematic analysis were used not only to identify, analyse and report patterns or themes of data, but also to organize and describe the data set in greater detail. Such a qualitative analytic method becomes a useful research tool when summarizing large bodies of primary data, and is comprised of the following six stages according to Braun and Clark (2006): becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing a report (Braun & Clark, 2006). These six articulated phases will subsequently be discussed in greater detail.

1.5.5.1 Data familiarization.

The initial phase of thematic analysis involved becoming fully immersed in the data set. To achieve this, the primary research data, namely the twenty-four articles, were read through multiple times. Active reading in this preliminary analytical phase involved the search for patterns and ideas, with the analogous recording of introductory code notes. Although laborious and time-consuming, Braun and Clark (2006) indicate that such a phase acts as the bedrock for other stages.

1.5.5.2 Initial code generation.

As the second analytical phase in the configuration of a thematic map (Braun & Clark, 2006), codes were identified and generated from the data with codes matched to their data extracts and then collated. In this manner, the researcher worked systematically through the

full data set, identifying specific features and organizing them into meaningful groups. Throughout this stage, the researcher considered coding for as many patterns as possible, coding to retain the context of the data extracts as well as coding individual extracts for as many themes as they could fit into. The data set was initially coded manually, and then transferred to the software program of Excel.

1.5.5.3 Theme search.

During this phase, similar codes were grouped to form overarching categories (Braun & Clark, 2006). In order to analyse these categories a thematic map was constructed, with the relevant coded data extracts categorized accordingly. A visual representation, namely a Data Charting Table (see Appendix A), was used in this regard as a concise means of arranging and organizing these codes into their applicable categories as well into possible candidate themes.

1.5.5.4 Theme review.

These mapped out categories were then reviewed and refined further into condensed candidate themes. Initially, the data within these candidate themes were checked for meaningful coherence with the data between themes checked for clear and discernible differences. Collated data extracts under these themes were then reviewed to verify the unity of patterned formations. Data extracts that did not fit within themes were either discarded or placed into another relevant theme (Braun & Clark, 2006). At this stage new themes were added, or existing themes reworked. Once these candidate themes appeared to adequately capture the coded data, the entire data set was then reviewed to determine if the themes fit into the context of the entire data set. The thematic map was then reworked until it appropriately fit the data set. Once the thematic map was adequately refined, this analytical phase resulted in a succinct account of the review's themes, topics and relations. Such a

comprehensive map offers the way forward towards the next step, which involves the defining and naming of themes.

1.5.5.5 Define and name themes.

A satisfactory thematic map guides the way towards the final stages of refining, defining and naming of themes. Owing to this, a separate analysis is conducted for each individual theme, to describe the crux of its scope and content within the overarching context of the review (Braun & Clark, 2006). In the process of further refinement each individual theme is elucidated by identifying possible subthemes. Such a process of refinement then culminates in the defining and reporting of final themes and subthemes. At this analytical stage, the final names of themes are considered, keeping clarity and brevity in mind.

1.5.5.6 Produce the report

Following such thematic descriptions and refinements, a final analysis in the form of a written report was completed (Braun & Clark, 2006). Recommendations for specific policies and interventions were explicitly indicated (see discussion in the recommendation section of chapter 3). This final stage involves convincing the reader of the virtue and validity of the thematic analysis, presenting compelling and illustrative examples in the form of an analytic narrative. Such an analytic narrative serves to bring the data to life, through convincing arguments that substantiate the review's research question. These arguments consist of evidence in the form of vivid examples of the data themes and extracts. In this way, a story of what the data set tells is communicated in a clear, concise, logical and interesting manner. Summing this up, detailed and vivid data extracts reinforce the report's themes or phenomena to boost the review's credibility (Spencer, Ritchie, Lewis, & Dillon, 2004).

1.6 Trustworthiness and credibility.

Conducting a trustworthy and credible review requires an auditable and systematic approach towards knowledge synthesis, together with complete transparency in terms of the methods used in the synthesis of primary studies (Whittemore, Chao, Jang, Minges, & Park, 2014). The scoping review, being qualitative in nature, entails careful documentation of both research and analysis, to provide a clear data trail throughout the process (Spencer et al., 2004). This recording process involves transparency about the salient features of the study's methods, decisions, and research strategies to ensure reliability, and to enable future replication. A process such as this will culminate in an audit trail of transparent data coverage, analytic construction and methodology to result in an in-depth exploration of the documented findings (Spencer et al., 2004; Whittemore et al., 2014).

One such reporting tool entitled "Enhancing transparency in reporting the synthesis of qualitative research" (ENTREQ) - promotes such transparency and comprises a checklist of 21-items that are grouped into five domains (Tong, Flemming, McInnes, Oliver, & Craig, 2012). The ENTREQ statement has been used as a framework and resource in aim of guiding the scoping review towards a complete and thorough literature synthesis. This checklist has been consulted throughout the scoping review process and is included as the ENTREQ Table (see Appendix B). As such, principles of scientific integrity have been applied by the researcher to the scoping review to produce trustworthy, accurate and valid conclusions.

1.7 Ethical considerations.

A scoping review is comprised of completed studies existing in the public domain which only involve non-identifiable group data. For this reason, ethical considerations that revolve around research participant's privacy, confidentiality and protection, as well as obtaining informed consent were not relevant to the present study (Ewusie et al., 2017). However, the

researcher considered the ethical handling of non-identifiable group data in the treatment of the written output and its ability to generate value and quality (Spencer et al., 2004) towards further research. Such worth and quality is presented as a scoping review that principally aids in the contribution and supplementation of knowledge. In this manner, the review offers early insights, by scoping issues in an initial exploration towards more comprehensive studies (Spencer et al., 2004). In this way, such research aims to have a positive impact with the researcher ethically responsible for the overall value of the scoping review, through the accurate representation of knowledge claims (Spencer et al., 2004). In order to accurately relay such information, the researcher endeavoured to push aside all personal perceptions and assumptions in favour of taking a more objective or neutral stance (Spencer et al., 2004). In support of this aim, the researcher adopted a stance of reflexivity in relation to her own positioning vis-à-vis the research topic (see discussion in the limitations section in chapter 3). Reflexivity is an awareness of the researcher's impact on the study, looking for potential sources of bias and limitation to the study in terms of personal background and researcher interest.

In addition to such reflexivity, two main questions were also taken into ethical consideration throughout the study to include: 'How accurately and fairly is the existing research handled?', and: 'Did the reviewed literature raise any ethical questions that needed to be addressed in the reporting of results?' (Institute of Education, University of London, n.d.). To address these questions in the context of the present study, information and data was continuously monitored for accuracy, fairness, authenticity and reflexivity to ensure the production of reliable research results within a realistic timeframe. In particular, the PRISMA guidelines (Arksey & O'Malley, 2005) and ENTREQ Table (see Appendix B) were used to direct the research process, making it more rigorous and systematic.

1.8 Chapter division.

The chapters that constitute this minor dissertation are introduced as follows:

Chapter 1: Introduction, problem statement and methods.

Chapter 2: Research article - A Scoping review of Yoga and Emotional-Social Intelligence in children and youth.

Chapter 3: Conclusions, limitations and recommendations.

1.9 Chapter summary.

The purpose of chapter 1 was to describe the proposed study, which aimed to conduct a scoping review to establish the role of Yoga in developing the competencies of ESI, that increase EQ among children and youth. The current chapter also served in introducing the study, together with a statement of the research problem, an outline of the research methodology as well as the ethical considerations pertinent to the study.

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Chapter 2

Research Article

ABSTRACT

Title: A Scoping Review of Yoga and Emotional-Social Intelligence in Children and Youth

Background and objective: A globalized world manifests new opportunities as well as new challenges. In particular, our modern world identifies the need for contemporary citizens to Transform, Adapt, Cope and Develop (TACD) with the flow of modernity. Emotional and social competencies, resources and skills are required in the form of Emotional-Social Intelligence (ESI) to improve Emotional Intelligence (EQ). Thus, becoming proficient in ESI abilities will equip young people with a greater capacity to TACD. Even though the practice of Yoga is associated with various ESI domains, such literature remains scattered across academic disciplines and sub-disciplines. Although connections are evident, there is a lack of direct focus on the potential relationship between Yoga and ESI, towards enhancing EQ. For this reason, results from the Yoga literature are often not contextualized according to the constructs of ESI and EQ. In response to this gap, a scoping review aimed to bring greater coherence to the isolated and scattered literature and to piece together the research that pertains to children, youth, Yoga as well as ESI and EQ as conceptualised in Bar-On's (2006) model. It is hoped that this will initiate the process towards literature integration, as well as identification of gaps in existing knowledge and promising avenues for future research.

Methods: A scoping review was considered a well-suited methodology for this study owing to the vast expanse of literature on the topic. For this purpose, the scoping review methodology of Arksey and O'Malley (2005) was specifically used. Articles on the topic were searched for within two electronic databases (Web of Science and Scopus). Articles were included based on predefined inclusion and exclusion criteria with those that were written in the English language and published from the year 1995 included in the study. Along these lines, articles were included

if they mentioned one or more of the ESI dimensions, in the context of Yoga, within a population of children or youth. These articles were then thematically analysed, with the data from these include studies then charted. After numerous stages of extraction with the selected databases (Web of Science and Scopus), 24 articles were eventually included in the study.

From the included articles, a thematic analysis was employed to identify the ESI themes and subthemes that were evident within the Yoga literature. From this, the main and minor ESI themes that were positively correlated with Yoga were charted. Additionally, data was grouped and charted according to the ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques, and well-being domain.

Results: From the thematic analysis the main ESI themes related to Yoga that were extracted and charted were the intrapersonal, interpersonal, stress management and general mood, together with the minor subthemes of impulse control, stress tolerance, interpersonal relations, self-awareness, self-regard, independence, optimism and happiness. More specifically, from the extracted main themes positive correlations were found between Yoga and the intrapersonal, stress management and general mood main themes, as well as the minor subthemes of impulse control, self-regard, self-awareness, stress tolerance, interpersonal relations and happiness. Data charting further revealed a prominent increase in publications on the topic from 2010, with the bulk of these articles published between 2013-2018. In terms of general trends, the data charting revealed that most Yoga interventions included sample sizes under one hundred, with research participants that were predominantly Caucasian, around eleven years of age on average, with no presenting condition and from a variety of grades, genders as well as schooling levels. These Yoga interventions were administered primarily in school settings over a period of less than a year, using the single most reported style of Hatha Yoga and with a central focus on mainly breath and posture.

Additionally, the incorporated literature stemmed mainly from the West (in particular the USA) and made equal use of quantitative as well as mixed method research designs. For the most part, the Yoga articles that were scoped were also linked to components of well-being.

Conclusions: To begin with, the literature that connected Yoga to the main and minor ESI themes of Bar-On's (2006) model was extensively spread across a variety of disciplines. The scoping review, which served to analyse and synthesise this literature within the context of Bar On's framework, charted themes and valuable data that highlight the connections, gaps and trends that could further guide more focused, future studies. The results from this scoping review ultimately reveal that Yoga holds promise as an intervention that enhances ESI with children and youth. Also, that Yoga possesses latent potential in developing these ESI skills and subskills within a variety of cultural contexts as well with diverse age, gender, grade and racial groups. The scoping review ultimately pieces together the existing knowledge of Yoga and ESI in children and youth, in aim of further investigating Yoga-based SEL programs that develop ESI competencies to enhance EQ and PYD.

Keywords: Yoga, Emotional-Social Intelligence, Emotional Intelligence, Bar-On model, Social and Emotional Learning, Child, Youth, Scoping review, Positive Psychology, Positive Youth Development.

1 Introduction

With younger generations increasingly thrust into the demanding world associated with globalization (Super, Harkness, Barry, & Zeitlin, 2011), a need exists for modern citizens to have the capacity to Transform, Adapt, Cope and Develop (TACD). In order to function optimally across these diverse environmental contexts, younger generations need to be developmentally prepared to adapt and cope, which in turn, requires the development of several social competencies and emotional resources (Baczyńska, 2015; Super et al., 2011). These emotional and social competencies develop an improved understanding of social situations which enable more effective emotional responses (Romanelli, Cain, & Smith, 2006)

Consequently, young people are often expected to leave educational contexts well-equipped with emotional and social aptitudes (Gagen, 2015). Relative to this, reports reveal that employee problem-solving, critical thinking, collaboration as well as communication skills are considered vital by employers (Newman & Dusenbury, 2015). In order to thrive in a complex, fast-changing and interconnected world, social and emotional skills have thus become key requirements (Newman & Dusenbury, 2015). Given that these social and affective resources are in greater demand, a need exists to support children and youth in acquiring the skills necessary to become well-equipped future adult citizens (Gagen, 2015; Mallya & Anand, 2012).

A construct which encompasses many of these social and emotional skills is Emotional-Social Intelligence (ESI). Bar-On (2006) developed the model of ESI, which is focused on the general goal of acting emotionally appropriately as well as effectively in social situations and interactions (Kumar & Rose, 2008). According to Bar-On (2010), ESI is defined as an arrangement of interconnected emotional and social skills that govern how successfully

individuals can know and express themselves; understand and relate to others; and cope with everyday challenges or demands. ESI is composed of five broad clusters, with each cluster further comprised of subskills and with measurements of these subscales constituting an overall Emotional Intelligence (EQ) score (Bar-On & Parker, 2000). In this manner, the competencies of ESI are the building blocks of EQ and lay the foundation towards increasing a general EQ score. Proficiency of these ESI skills and subskills enhance EQ scores, with Bar-On (2006) equating increased ESI with increased EQ. As such, for the purpose of this article, the terms will often be used interchangeably.

The five main dimensions of ESI are defined as follows (Bar-On, 2006; Bar-On, 2010; Di Fabio, Bernaud, & Loarer, 2014), with: (a) The Intrapersonal, as the capacity for personal awareness and expression of emotions, strengths as well as weaknesses; (b) The Interpersonal, as the ability to recognise the emotions, feelings and needs of others to create and sustain positive relations; (c) Adaptability, as the capacity to cope flexibly with everyday problems; (d) Stress management, as the ability to adaptively cope with stressful situations and manage emotions to derive benefit; and (e) General mood, as the proclivity towards being optimistic and expressing positive feeling. These five domains, when measured, collectively add up to achieve an EQ score. Such an EQ score can increase with age up to the fifth decade, leaving ample opportunity to develop these ESI competencies for improved EQ (Wood, Parker, & Keefer, 2009).

These ESI skills and competencies are endorsed in contemporary educational settings, through Social and Emotional Learning (SEL) programs that aim to enrich adaptive functioning and Positive Youth Development (PYD), and develop personal strengths as tools towards positive, desired outcomes (Abrahams et al., 2019; Lerner, Almerigi, Theokas, & Lerner, 2005). This strengths-based approach ultimately emphasises what can go right as opposed to what could go wrong in developing young people (Lerner et al., 2005).

In this regard, PYD stresses primary prevention in terms of strength development and competency creation, in contrast to secondary and tertiary prevention that predominantly aim to treat pathology (Lerner et al., 2005). According to this, PYD is based on the premise that every young individual is a developable resource that has the potential capacity for success, health and positive development (Lerner, Dowling, & Anderson, 2003; Lerner et al., 2005). PYD is ultimately based on the principle of plasticity, which advocates a potential for systematic change throughout the course of development, supporting developing skills, abilities and interests (Lerner et al., 2005).

In an era that increasingly aims at PYD, SEL programs strive to cultivate a wide range of ESI attributes that are essential to social and emotional development and EQ (Shek, Sun, & Merrick, 2012). These programs nurture these ESI skills or abilities specifically among children and youth thereby encouraging PYD, with Yoga increasingly viewed as a potential SEL program (Khalsa & Butzer, 2016). Yoga-based interventions strive for mental, emotional and spiritual well-being, and as a balanced and integrated practice, Yoga has been found to improve cognitive function and emotional health in adults and children (Govindaraj, Karmani, Varambally, & Gangadhar, 2016; Hagen & Nayar, 2014; Narasimhan, Nagarathna, & Nagendra, 2011; Yeung, 2014).

Although Yoga interventions demonstrate therapeutic benefit across all age groups, the most remarkable progress occurs in terms of the physical, behavioural, mental and emotional improvements found in children and adolescents (Bubela & Gaylord, 2014; Khalsa & Butzer, 2016). It has been proposed that these improvements could be the result of the abovementioned principle of plasticity, and the higher probability of change during the stages of development associated with childhood and youth (Lerner et al., 2005).

In addition to this, over the past few decades, and specifically from the year 2000, Yoga has increasingly captured the scientific community's attention for its cognitive, psychological and emotional benefits (Ferreira-Vorkapic et al., 2015; Field, 2016; Khalsa, 2013; McCall, 2014). Evidently, Yoga interventions are also associated with various ESI skills, competencies, and abilities that are positively related to EQ (Ganpat & Nagendra, 2011; Ganpat, Dash, & Ramarao, 2014; Kumari & Sahu, 2018).

At present, the findings and research-based insights related to Yoga-based SEL programs and their association with ESI and EQ appear to be extensively dispersed. Such literature spans across various academic disciplines and domains from the medical to psychological, school to workplace, and secular to spiritual (Bonura & Tenenbaum, 2014; Douglass, 2010; Hartfiel et al., 2012; Stephens, 2017; Varambally & Gangadhar, 2012; White, 2012). Although a substantial amount of this literature reports positive correlations between Yoga and the ESI competencies outlined in Bar-On's (2006) model, it becomes difficult to obtain an integrated overview of such a relationship.

Establishing a theoretical relationship between ESI, EQ and Yoga is a critical step towards developing SEL programs for PYD. A lack of coherent overview and integration of existing research hinders future studies on ESI-based, SEL Yoga programs that could improve EQ and PYD. To address this issue, the current study attempts to review the scope of scientific and academic literature in relation to the association that exists between Yoga, ESI and EQ among children and youth. In this manner, the study is a scholarly attempt to condense, categorise, summarise and synthesise the diverse and scattered body of theory. Such efforts could ultimately offer greater clarity, guidance and coherence in addressing the literature gaps and providing future research recommendations and directions.

2 Methodology: Scoping Review

As previously suggested, the literature pertaining to Yoga and its contribution towards ESI remains dispersed and unintegrated, spanning across various scientific disciplines and domains. A scoping review thus becomes a well-suited methodology in such cases, where the need exists to integrate a broad set of existing research findings, and to explore the diversity of available literature, which varies by method and is distributed across disciplines (Levac, Colquhoun, & O'Brien, 2010).

The purpose of the scoping review is to explore the possible breadth of what is available in terms of evidence, and as such, the selection, collection and summarizing of such literature can lead to a more integrated compilation of findings to guide and inform future research, policy and practice (Levac et al., 2010; Tricco et al., 2016). As such, a scoping review attempts to offer an initial assessment of the pre-existing literature, examining the variety, amount, as well as nature of research activity (Levac et al., 2010). In the process such an initial assessment aims to guide subsequent research studies through the identification of literature gaps, themes, types and maps that relate to an exploratory research question (Levac et al., 2010).

In order to address the research question that guides this study, PRISMA guidelines will be adopted to assist in the standardization of reporting. In outlining these guidelines, Arksey and O'Malley (2005), identify six stages, of which five are relevant to the proposed scoping review. The five relevant stages include: (1) the identification of a research question, (2) the identification of relevant studies, (3) the selection of studies, (4) data charting, as well as (5) the collation, summarization and reporting of results. The sixth stage, which is optional, and typically not included in scoping reviews (and which will not be followed in this study), involves the validation of research findings by means of consulting with stakeholders (Levac et al., 2010).

It is important to note that such a process of knowledge synthesis is not necessarily directly linear, with the five proposed stages interchangeable in pursuit of extensive inclusion and comprehensive literature coverage (Arksey & O'Malley, 2005; Levac et al., 2010). The need for such flexibility is taken into consideration throughout the research process.

Accordingly, during the first stage of this framework the researcher identified the research question to guide the pursuit of full literature coverage and fulfil the scope of the study (Arksey & O'Malley, 2005). Secondly, the researcher identified the relevant studies from numerous sources, with this stage establishing which databases would be searched (Arksey & O'Malley, 2005). The third stage involved detailing the inclusion and exclusion criteria to set the parameters for the search process (Arksey & O'Malley, 2005). Within the fourth stage the researcher created an Excel spread sheet from which a Data Charting Table (see Appendix A) was constructed which served to extract the pertinent data out of the chosen studies in a consistent manner (Arksey & O'Malley, 2005). Furthermore, the fifth and final stage of this study involved a thematic analysis whereby the researcher examined the specific articles to extract the relevant themes that define the research question (Arksey & O'Malley, 2005).

In order to enable the process of thematic analysis, Braun and Clarke's (2006) outline for analysis was applied which involved a sequence of six stages. This sequence was initiated with the researcher reading and re-reading the data to become immersed in and familiar with such data. To facilitate this process, the researcher created an Endnote folder which contained the selected scrutinized articles in a marked and labelled format. This phase merged with the second phase of what Braun and Clarke (2006) deemed as the generating of initial codes. As the researcher read through each article, the prominent features were highlighted and subsequently marked by a code that held significance in the context of the study. In the stages to follow the collated codes were interpreted and classified into main themes and minor subthemes.

Subsequent to this, in the consolidatory phase, the researcher aimed at creating further coherence by refining, combining, splitting or discarding themes to form clear distinctions between these themes. Other themes were grouped and labelled together in the interest of retaining brevity and clarity as well as removing repetition. Within the final phase, the researcher converted these extracted thematic understandings and other pertinent details that substantiate these themes, into an organized Data Charting Table (see Appendix A). In this way, the researcher contextualized the themes and subthemes according to the broader research question. Many of the themes were pre-defined and stipulated beforehand to include most of the main and minor ESI dimensions of Bar-On's (2006) model. In the following sections, each of these steps and their associated outcomes are discussed in greater detail.

2.1 Identifying the research question.

As mentioned by Arksey and O'Malley (2005), the first phase of executing a scoping review is to properly identify and describe the research question, which constitutes the guiding focus towards complete literature coverage. This was of particular relevance within the context of this study, owing to the diversely distributed and multifaceted landscape of the literature. In addition to being dispersed and diverse, the research that pertains to Yoga is immense. Such literature extends across numerous academic disciplines and fields ranging from the medical to psychological, from the workplace to school and from the secular to spiritual (e.g. Bonura & Tenenbaum, 2014; Douglass, 2010; Hartfiel et al., 2012; Stephens, 2017; Varambally & Gangadhar, 2012; White, 2012). Although connections are evident between the Yoga literature and skills relating to ESI, such widespread literature lacks direct focus in terms of the relationship between Yoga, ESI and EQ.

With Yoga related research having grown substantially as it continues to gain popularity in the Western world, it becomes increasingly challenging to provide coherence to a diverse, immense, isolated and scattered body of literature. In order to formally establish such unity of associations, the study aims to review the scope of relevant academic research by offering a broad outline on the literature relevant to Yoga and ESI skills specifically among children and youth. With research findings related to the connections between Yoga and the skills of ESI remaining scattered and isolated, the potential for Yoga to be applied in the contexts of SEL programs for EQ is unnecessarily being circumscribed. With these associations more firmly established in the form of a summarized Data Charting Table (see Appendix A), future studies can then further explore the precise pathways between Yoga and the skills and subskills of ESI, with a more in-depth coverage of key topics. In addition to identifying avenues for future research, appropriate recommendations can be made concerning future practice and policy together with suggestions for informing alternative practices and policies. This review might be of value to education administrators, stakeholders, policy makers, educators, Yoga teachers and the SEL facilitators that work directly with children and youth, offering potential reform and progress in these fields.

Based on the aforementioned, the following research question (and corresponding research objective) was formulated to guide the study: *What is the association between Yoga, ESI and EQ among children as well as youth, in a milieu of PYD and SEL programs?* This in turn formed the basis of the main research objective which was: *To conduct a scoping review of existing literature on the association between Yoga, ESI and EQ among children and youth, within a milieu of PYD and SEL programs.*

2.2 Identifying relevant studies from numerous sources.

In accordance with the steps specified by Arksey and O'Malley (2005), two appropriate academic databases, Scopus, and Web of Science, were identified in September 2019. These databases offered an adequate quantity of articles that were deemed to be complete and extensive enough for the purposes of this scoping review. From these selected databases available literature was identified that could possibly illustrate Yoga's link to the main and minor ESI dimensions of Bar-On's (2006) model with respect to children and youth.

After much deliberation over keywords, an all-embracing table was constructed (see Table 1). Keywords were grouped according to a *what*, *why* and *who* category to broadly include all word options in the searches (Johnston, Crooks, Snyder, & Kingsbury, 2010). These targeted word groups were found to produce the most effective results in the most rigorous manner possible. Keywords from these distinctive categories were combined in various ways using the Boolean operators, "AND" and "OR" (Aromataris & Riitano, 2014). Such Boolean operators ensured that all the keywords and relevant combinations of keywords were accounted for, providing greater methodical rigor and inclusion.

The database search focused mainly on obtaining literature on Yoga interventions that related to one or more of the main or minor ESI skills or dimensions among children or youth. The literature that was derived from these databases was limited to those sources published in the English language from the year 1995 and onwards, as this coincides with the time period when EQ was popularized by Daniel Goleman (1995) in the best-selling book entitled "Emotional Intelligence", which in turn prompted scientific research on the construct. Grey literature such as editorials, letters, unpublished research, conference papers, etc. were excluded from the review in favour of focussing only on findings derived from academic, scientific and peer-reviewed research. Such grey literature is typically not scientifically peer-reviewed and for this reason might reflect findings that are of a lower quality, potentially

containing unreliable results; with such literature also lacking in complete structure, preventing a comprehensive analysis (Batt, Fox-Rushby, & Castillo-Riquelme, 2004; Birnbaum, Daily, O'Rourke, & Loretto, 2015). As such, included studies were limited to Open Access, peer-reviewed scientific articles that were pertinent to the topic.

2.3 Study selection relative to inclusion and exclusion criteria.

A basic outline of the study's parameters was set up in the form of inclusion and exclusion criteria in order to guide the selection process. This allowed for the removal of irrelevant papers by narrowing down the literature in terms of the publication date, population as well as the intervention type and outcome (Armstrong, Hall, Doyle, & Waters, 2011).

Articles were included if:

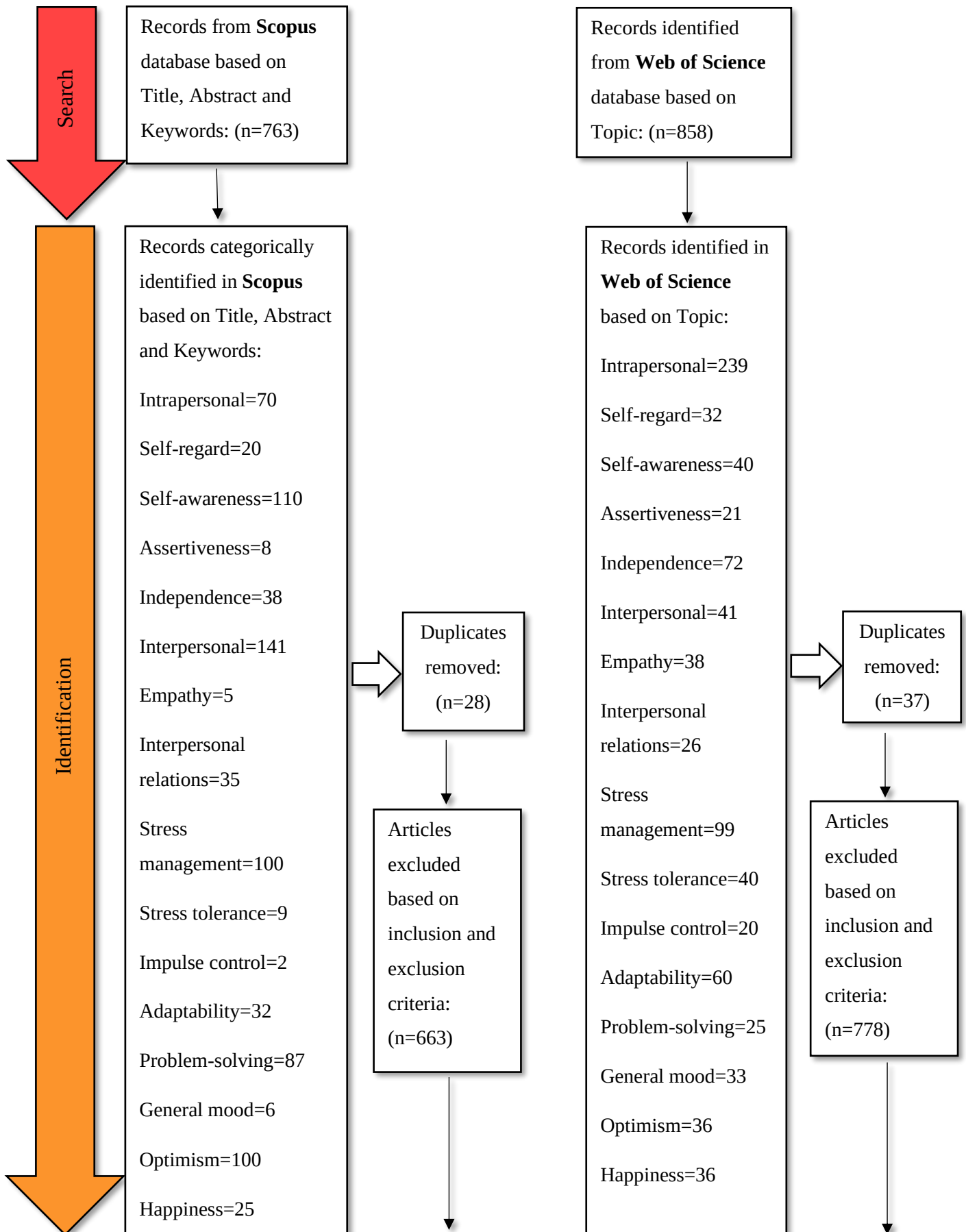
- The article offered relevance in terms of either positive, negative or no results, of the influence or connection of the practice of Yoga in relation to one or more dimensions of Bar-On's (2006) ESI model.
- Yoga was defined as an applied practice in terms of one of the commonly known styles or variations thereof to include elements of the eight limbs namely: moral restraint, self-purification, physical posture, breath control, sense control, focused concentration, meditation or pure awareness.
- They were published after 1995, given that this date marked a resurgence of EQ literature in the wake of the publication of Daniel Goleman's popular book on the topic (Goleman, 1995), which sparked subsequent academic interest in the topic.
- The study population was comprised of children and youth between the ages of seven to twenty-four.

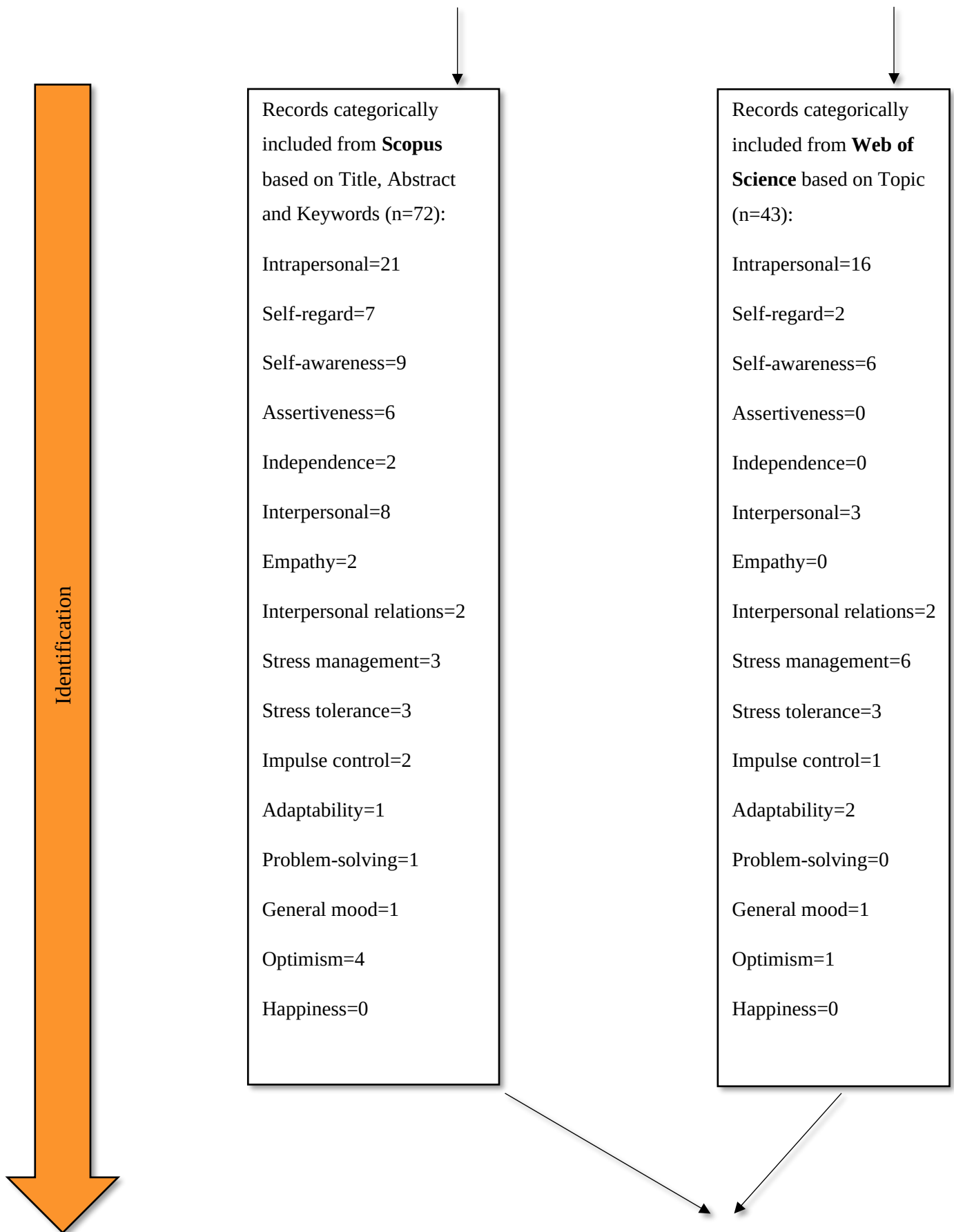
Articles were excluded if:

- They were in a format other than that of a peer-reviewed academic or scientific article, and as such, most books and book chapters, as well as editorials, review letters, posters, meeting abstracts, and proceeding papers were excluded.
- They were published in a language other than English.
- They included a population sample other than that of children or youth between the ages of seven and twenty-four as in mixed age groups, teachers, residential staff or pre-schoolers.
- The intervention was combined, as for instance in Yoga-based psychotherapy or composed of other mediation practices such as Tai Chi, Qigong, Mindfulness, Hypnosis, Acupuncture or horse-riding.

Through the use of Boolean operators, as previously discussed, searches within the databases yielded the following results: The Scopus database search (based on refinements by title, abstract and keywords) produced 763 articles, with the Web of Science database search (based on refinements by topic) producing 858 articles. The cumulative total of the articles from these databases was 1621. From this number, the researcher then removed 65 duplicates in total, with the remaining 1556 articles then being screened in terms of title or topic suitability, which resulted in the exclusion of a further 1441 articles. After this, the remaining 115 articles were then assessed for appropriateness in terms of their abstract's concordance to both the research question as well as to the inclusion and exclusion criteria. According to this, a further 40 articles were eliminated, having not met the inclusion and exclusion criteria, leaving 75 articles to be scrutinised in their full-text entirety. Out of these remaining 75 full-text articles, 51 articles were considered unsuitable with the remaining 24 deemed appropriate. These 24 articles were subsequently included in the scoping review.

Following the guidelines for PRISMA flow diagrams (Arksey & O'Malley, 2005), Figure 1 provides a detailed and systematic overview of the process that was applied to the scoping review.





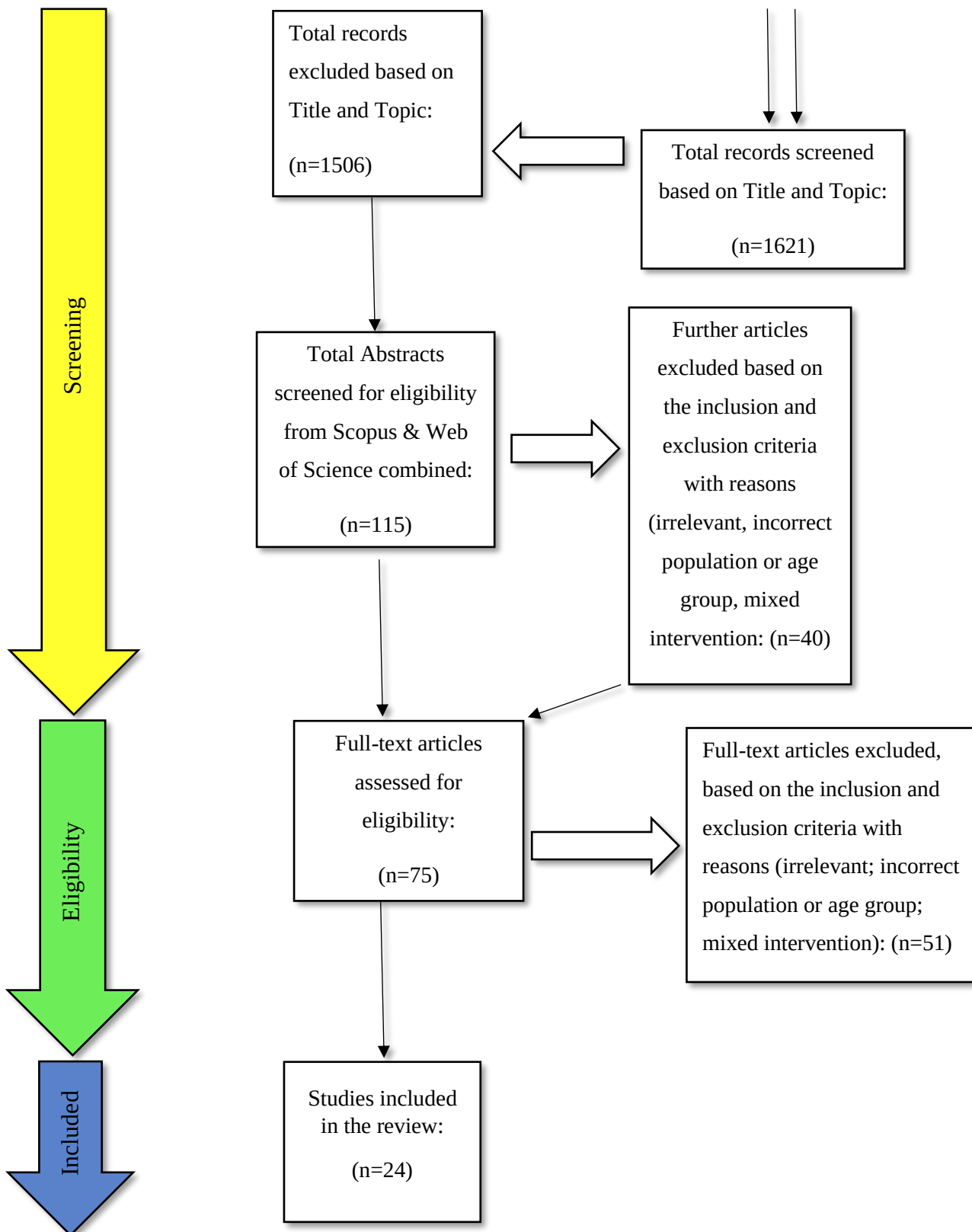


Figure 1. Prisma flow diagram

2.4 Charting of the data.

As delineated in the fourth stage of Arksey and O'Malley's (2005) framework, data collection within scoping reviews encompasses the extraction of significant data from the chosen studies. In line with this, the researcher created a table to chart the data (see Appendix A). Levac et al. (2010) considers such a table as an important synoptic element in aid of the extraction, documentation, and revision of salient variables that offer direction towards the research question. In the context of the present study, the data was charted in accordance with the following specified categories: ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques and well-being domain (see Data Chart contained in Appendix A).

2.5 Identifying core themes via thematic analysis.

According to the fifth stage as stipulated by Arksey and O'Malley's (2005) scoping review outline, these 24 articles were then analysed by means of a framework analytic approach and thematic analysis (Braun and Clarke, 2006). This approach enabled the generation of a comprehensive and integrated framework of the scope of literature. In addition to the abovementioned predetermined categories, the scoping review identified twenty predefined ESI themes on the charting form. According to item three of the ENTREQ Table (see Appendix B) a comprehensive research strategy involved pre-planned search tactics, to allow the entire scope of available academic literature to be reviewed. The existing academic literature was reviewed according to five main dimensions that collectively contained fifteen minor themes. All in all, twenty themes were reviewed, with the remainder of the article devoted to outlining these themes.

3 Results

3.1 Data charting results.

As noted previously, the fourth stage of Arksey and O'Malley's (2005) framework involves the extraction and charting of significant data from the chosen studies. In line with this, the researcher created a table to chart the data (see Appendix A) with the aim of obtaining a contextual summary of the focal features of the existing research. This process in turn assists in the detection of gaps, which enables researchers to make recommendations for future research. The remainder of this section is devoted to the discussion of the findings that emerged from the data charting.

In relation to the year of publication, the findings clearly reveal that, prior to 2004, literature relating to Yoga, ESI skills and youth was scarce. Most notably, from 2010 there was a steady surge in the publication of peer-reviewed articles with 79% of the included articles published between 2013 and 2018 and 25% published in 2018.

With regard to the age of the research participants, the collective average age was 11.10 years.

Regarding the grade level of research participants, many the articles (17/24, or 70.8%) indicated that research participants were from mixed grades.

In terms of the intervention sample sizes, sample sizes over one hundred were noted in 30% of the included quantitative studies, in 30% of the mixed method studies and in 25% of the qualitative studies. Relative to this, sample sizes under one hundred were noted in 70% of the included quantitative studies, 70% of the mixed method studies and in 75% of the qualitative studies.

Regarding race, study samples were primarily Caucasian (37.5%), with smaller percentages recorded for African Americans (25%), Indians (25%), Hispanics (16.7%), Asians (4.2%), Africans (4.2%), Haitians (4.2%) and other unknown populations (4.2%).

As far as gender is concerned, 91.7% of the study samples contained a combination of genders, with 4.2% having utilised all-male samples and the other 4.2% all-female samples.

Concerning the presenting conditions of the sample population, 50% had no condition, 20.8% were at high-risk for social and behavioural problems, 4.2% had substance abuse issues, 4.2% were autistic, 4.2% suffered from trauma, 4.2% were obese, 4.2% had psychiatric conditions, and 4.2% had ADHD.

In relation to the sample's schooling level, 29.2% of the studies included elementary school children, 25% included secondary school children, 16.7% included middle school children and the remaining 37.5% of studies failed to specify the schooling level of their participants.

Regarding the article's setting, 33% of the interventions occurred on a school property, 29.2% in a classroom, 12.5% in a clinic or hospital, 8.3% in a camp, 8.3% in a Yoga centre, 4.2% in a community centre and the other 4.2% in an orphanage.

In terms of the countries in which the studies were conducted, it was found that studies were unevenly distributed with a large proportion of these studies stemming from Western countries such as the USA (58.3%), the United Kingdom (4.2%) and Australia (4.2%) with the remaining studies being from India (25%), Haiti (4.2%) and Kenya (4.2%).

Regarding Yoga styles, Hatha Yoga was the most featured style, comprising 10/24 (41.7%) of the studies that were reviewed. Integrated, Kripalu, Kundalini, Ashtanga and Iyengar Yoga collectively constituted an additional 42% of publications, with the remaining 17% of studies being unspecified in terms of Yoga styles.

With regard to methodology, an overall analysis of the 24 core articles of the scoping review revealed that 41.7% of the studies were quantitative in nature, a further 41.7% were of a mixed method research design, with the remaining 16.7% being qualitative.

Regarding the results, overall, 22/24 (91.7%) of the articles that were included in the scoping review found positive associations between Yoga interventions and one or more of Bar-On's (2006) main or minor ESI themes. In addition to this, 2/24 (8.3%) found no association between ESI and Yoga.

Concerning the duration of the Yoga interventions, 22/24 (91.7%) of the Yoga interventions took place over less than a year, and 2/24 (8.3%) took place over one year or more.

With regard to the number of Yoga sessions that took place, no significant patterns were noted.

From the reviewed articles, breath and posture were the core techniques that were included in 14/24 (58.3%) of the articles on Yoga interventions.

Finally, out of the 22/24 (91.7%) of articles that discovered a positive relationship between Yoga and the proficiencies of ESI, 21/24 (87.5%) of these studies were also positively correlated with various features of well-being.

3.2 Thematic analysis: Core themes.

According to the fifth stage as stipulated by Arksey and O'Malley's (2005) scoping review outline, the twenty-four included articles were analysed by means of a *framework analytic approach* and *thematic analysis* (Braun and Clarke, 2006). This approach assisted in generating a comprehensive and integrated framework on the scope of literature. According to item three of the ENTREQ Statement Table (see Appendix B) a comprehensive research strategy involved pre-planned search tactics, to allow the entire scope of available academic literature to be reviewed. According to the reviewed academic literature, four main ESI

themes and eight minor ESI subthemes emerged, resulting in a total of twelve themes. These main and minor ESI themes will subsequently be discussed.

3.2.1 Yoga and the intrapersonal dimension of ESI.

The intrapersonal dimension is considered as an overarching theme that is composed of minor subthemes such as self-regard, self-awareness, assertiveness, independence and self-actualization (Bar-On, 2006). With regard to Bar-On's (2006) model, this main intrapersonal theme is based on being aware of oneself, understanding personal strengths and weaknesses as well as expressing thoughts and feelings in a constructive manner. Relative to this, the literature was scoped for reported relationships between Yoga and the main as well as minor intrapersonal themes as reflected in Bar-On's (2006) ESI model.

Regarding the main intrapersonal theme, the scoping review yielded three minor subthemes in relation to Yoga interventions, which included self-regard, self-awareness and independence. From the findings of the scoping review the main and minor themes related to the collective intrapersonal competency were present in 19/24 (79.2%) of the included articles. Taking into consideration the overlap of these main and minor themes, 16/24 (66.7%) included the main intrapersonal theme, 7/24 (29.2%) included the subtheme of self-awareness, 6/24 (25%) included the subtheme of self-regard and 2/24 (8.3%) included the subtheme of independence.

More specifically, from the above main and minor themes that were extracted, Yoga was positively associated with the subtheme of self-regard in 6/24 (25%) and with self-awareness in 5/24 (20.8%).

From these scoped articles on Yoga, the intrapersonal dimension was the most prominent and widely reported domain from Bar-On's (2006) ESI model. In particular, the Yoga interventions described in these articles were associated with higher levels of the ESI subskills of self-regard and self-awareness. These results ultimately suggest that Yoga interventions could assist in promoting intrapersonal competencies such as self-regard and self-awareness in children and youth.

3.2.2 Yoga and the stress management dimension of ESI.

The stress management dimension is considered as an all-embracing theme that is comprised of minor subthemes such as stress management, stress tolerance and impulse control. Regarding Bar-On's (2006) model, the main competency of stress management is based on one's ability to successfully manage and control emotions in a constructive manner. Relative to this, the literature was scoped for reported relationships between Yoga and the main as well as minor stress management themes as reflected in Bar-On's (2006) ESI model.

Regarding the main stress management theme, the scoping review yielded two minor subthemes in relation to Yoga, which included stress tolerance and impulse control. Based on the findings of the scoping review, the collective stress management domain and its associated main and minor themes, featured in 15 out of the 24 (62.5%) scoped articles. Taking into consideration the overlap of these main and minor themes, the subtheme of impulse control was contained in 12/24 (50%) and the subtheme of stress tolerance in 9/24 (37.5%) of the articles. Additionally, the main stress management theme featured in 6/24 (25%) of the articles. Specifically, 10/24 (41.7%) of the articles indicated a positive association to the subtheme of impulse control, 9/24 (37.5%) of the articles reported a

positive correlation to the main theme of stress management and 4/24 (16.7%) of the articles conveyed a positive relationship to the subtheme of stress tolerance.

From the results of the scoping review, it is evident that the stress management dimension therefore showed great prominence in relation to its association with Yoga, given that it was the second most reported domain from Bar-On's (2006) ESI model. Relative to this, Yoga interventions were to varying degrees associated and positively correlated with higher levels of the ESI competency of stress management as well as to the subskills of impulse control and stress tolerance. These findings suggest that Yoga interventions could assist in promoting stress management competencies such as impulse control and stress tolerance among children and youth.

3.2.3 Yoga and the interpersonal dimension of ESI.

The interpersonal dimension is considered as an all-encompassing theme that contains minor subthemes such as empathy, social responsibility and interpersonal relations. Regarding Bar-On's (2006) model, the interpersonal competency is based on one's capacity for social awareness, understanding the feelings of others and being able to relate to them. Regarding this, the literature was scoped for reported relationships between Yoga and the main as well as minor interpersonal themes as reflected in Bar-On's (2006) ESI model.

Regarding the main interpersonal theme, the scoping review yielded one minor subtheme in relation to Yoga, namely interpersonal relations. In line with the findings of the scoping review, themes associated with the collective interpersonal dimension was included in 9 out of the 24 (37.5%) scoped articles. Taking into consideration the overlap of these main and minor themes, the main interpersonal theme featured in 7/24 (29.2%) of the articles, with the minor subtheme of interpersonal relations being included in 7/24 (29.2%) of the articles.

More specifically, 6/24 (25%) of the articles indicated a positive association to the main interpersonal theme, with 3/24 (12.5%) of the articles conveying a positive relationship to the subtheme of interpersonal relations.

From these results, the interpersonal dimension, together with its main and minor themes, showed moderate significance within the scope of studies and was the third most reported domain from Bar-On's (2006) ESI model. Relative to this, Yoga interventions showed positive correlations with the main interpersonal competency and interpersonal subskill of ESI. These findings suggest that Yoga interventions could also be of value in promoting interpersonal competencies such as interpersonal relations in children and youth.

3.2.4 Yoga and the general mood dimension of ESI.

The general mood dimension is considered a predominant theme that is composed of minor subthemes such as optimism and happiness. In terms of Bar-On's (2006) model, general mood is the ability to be positive, self-motivated and content, generating positive affect. Relative to this, the literature was scoped for reported relationships between Yoga and the main as well as minor general mood themes as echoed in Bar-On's (2006) ESI model.

In relation to the main general mood theme, the scoping review generated two minor subthemes in relation to Yoga, to include optimism and happiness. Regarding the findings of the scoping review, the main and minor themes associated with the collective interpersonal dimension appeared in 8 out of the 24 (33.3%) articles. Taking into consideration the overlap of these main and minor themes, the main general mood theme featured in 6/24 (25%) of the articles. Relative to this, the subtheme of optimism appeared in 2/24 (8.3%) of the articles and the subtheme of happiness appeared in 1/24 (4.2%) articles.

More specifically, 6/24 (25%) of the articles indicated a positive association to the main general mood theme, with 2/24 (8.3%) of the articles conveying a positive relationship to the subtheme of happiness.

From these results, the general mood domain, together with its main and minor themes, showed comparable significance to the interpersonal domain but was the least reported domain from Bar-On's (2006) ESI model. Relative to this, Yoga interventions showed positive correlations with the competency of general mood as well as with the ESI subskill of happiness. These findings suggest that Yoga interventions could potentially assist in promoting general mood competencies such as happiness in children and youth.

In connection to these results, it is necessary to convey that not all the above-mentioned themes and subthemes were positively correlated with Yoga. Relative to this, the main themes that were most strongly correlated with Yoga were ranked in the following order: stress management followed by the interpersonal together with general mood. More specifically, the main ESI themes that were positively correlated with the articles on Yoga were the stress management theme (37.5%), the interpersonal theme (25%) as well as the general mood theme (25%).

Additionally, the subthemes that were most strongly associated to the Yoga interventions were ranked as follows: impulse control, self-regard, self-awareness, stress tolerance, interpersonal relations and happiness. In particular, the minor subskills of ESI that were positively associated with Yoga were impulse control (41.7%), self-regard (25%), self-awareness (20.8%), stress tolerance (16.7%), interpersonal relations (12.5%) and happiness (8.3%).

In relation to these results, overall, 22/24 (91.7%) of the articles that were included in the scoping review found positive associations between Yoga interventions and one or more of

Bar-On's (2006) main or minor ESI themes (discussed above). In addition to this, 2/24 (8.3%) found no association between ESI and Yoga. This demonstrates that most of the articles were positively correlated with Yoga interventions and alludes to the potential benefit of Yoga in terms of ESI.

4 Discussion

The aim of the current study was to scope the full breadth of literature associated with the relationship between Yoga and ESI and EQ (as conceptualised by Bar-On (2006)) among children and youth. According to this, the predefined themes and subthemes of Bar-On's (2006) model were explored in terms of their occurrence and prevalence in the scoped articles. In addition to this, the prominent features of each article were charted in order to contextualise these themes.

The scoping review examined 24 articles in total which were selected through adherence to a rigorous set of inclusion and exclusion criteria. An excel spreadsheet was constructed to chart the applicable data, illustrating the prominent elements of each article according to classified groups. Data was subsequently extracted from the pertinent articles according to the ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core Yoga techniques and well-being domain.

Regarding methodology, an overall analysis of the 24 core articles of the scoping review revealed that 41.7% of the studies were quantitative in nature, a further 41.7% were of a mixed method research design, with the remaining 16.7% being qualitative. These findings suggest that whilst the topic has been studied from a variety of methodological angles, there currently appears to be less of an emphasis on the exploration of the relationship between Yoga and dimensions of ESI and EQ via qualitative methods.

In terms of results, a large percentage of the included studies (91.7%) reported that Yoga interventions were successful in improving one or more elements of ESI. This suggests that a variety of Yoga styles and core techniques could hold potential in cultivating ESI competencies with children and youth. In particular, the review identified which specific dimensions of ESI and EQ have been researched in terms of their association with Yoga, and to what extent this is the case. Of the twenty (five main and fifteen minor) themes and subthemes included in Bar-On's (2006) ESI model, four out of the five main themes and eight out of the fifteen minor subthemes were evident in the articles. Main themes were ranked based on the number of articles in which they appeared. In particular, the main intrapersonal theme came up in 66.7% of the articles, the main interpersonal theme in 29.2% of the articles, the main stress management theme in 25% of the articles, and the general mood theme in 25% of the articles.

With regard to the eight minor ESI subthemes, these were also ordered from high to low representation in the following order: impulse control, stress tolerance, interpersonal relations, self-awareness, self-regard, independence, optimism and happiness. More specifically, the minor subtheme of impulse control came up in 50% of the included articles, stress tolerance in 37.5%, interpersonal relations in 29.2%, self-awareness in 29.2%, self-regard in 25%, independence in 8.3%, optimism in 8.3%, and happiness in 4.2% of the articles.

These findings suggest that ESI related dimensions associated with the intrapersonal domain, were present in 19 out of the 24 articles and as such, was the most prominent and well-recorded theme within the study. Subsequent to this, main and minor themes related to the stress management domain featured in 15 out of the 24 articles and also showed great prominence within the study. Successively, the interpersonal domain was included in 9 out of the 24 articles, showing moderate significance within the scope of studies.

Lastly, the general mood domain appeared in 8 out of the 24 selected studies showing comparable significance to the interpersonal domain. Whether these findings are reflective of the fact that Yoga interventions bear a stronger relationship to these dimensions, or whether it merely represents an emphasised research interest in these constructs is unclear from the review and would need to be clarified in future studies.

However, the findings nonetheless suggest that Yoga might be a particularly significant empirically founded avenue towards cultivating impulse control, and to a lesser extent, stress tolerance, interpersonal relations, self-awareness, and self-regard. Casting these findings in an even more favourable light is the fact that the majority of articles (91.7%) indicated a beneficial relationship between Yoga and some aspect of general well-being. Of these articles that showed positive relations to well-being, 21/24 (87.5%) of the articles were positively correlated to one or more of the main or minor ESI themes. This demonstrates that in addition to improving ESI, Yoga also improves well-being (Hagen & Nayar, 2014; Khalsa & Butzer, 2016).

A scoping review of these ESI dimensions relative to Yoga does, however, demonstrate that the competencies in this model are interconnected and complex and that the impact of Yoga interventions are probably not simple and linear. As previously mentioned in relation to the intrapersonal domain, developing the competency of self-awareness extends to other areas of functioning to improve social interaction, self-regulation, life satisfaction, positive development and a happier mental state (Bergen-Cico, Razza, & Timmins, 2015; Kishida et al., 2018; Pandya, 2018; Palgi, 2007; Park, 2004). On a similar note, stress management reduces anxiety as well as bullying behaviour and allows for more positive adaptation, with greater impulse control leading to enhanced adaptability (Butzer et al., 2016; Centeio, Whalen, Thomas, Kulik, & McCaughtry, 2017; Parker et al., 2004; Premanand & Mallya, 2017; Weaver & Darragh, 2015). Additionally, happiness as an element of the general mood

domain improves problem-solving (Park, 2004). Echoing this observation, higher levels of self-regard also correspond with increased problem-focussed coping and adaptability; with positive self-esteem predictive of adaptive coping in maltreated youth and low self-esteem with depression and numerous other mal-adaptations (Bhardwaj, Singh, Balkrishna, & Telles, 2017; Cicchetti & Rogosch, 2009; Thoits, 2013). This highlights the potential nonlinear relationships that exist between Yoga and the competencies of ESI, as an intricate web of interconnections that could be studied further in future research.

Regarding the charted data, a noteworthy pattern was recognized in terms of the publication dates. According to the dates of the collected articles, the earliest recorded date was from 2004, highlighting steady growth from the year 2010, with most of the articles published in 2018. Relative to this, only 4.2% of the studies were recorded before 2010, with 45.9% being published between the period of 2014-2017, and 25% of the total number of articles appearing in 2018. This pattern demonstrates a substantial increase from the year 2014 in publications related to Yoga and ESI, specifically in relation to children and youth. Khalsa and Butzer (2016) reiterate that such rapid advancements in the field could be the result of an increasing demand for youth to attain the necessary behavioural and emotional skills for SEL. This in turn shows that publications related to Yoga, ESI and EQ in children as well as youth have grown substantially during the past decade, and that there seems to be a trend of an ever-increasing publication rate.

Given that both main genders and a variety of age and schooling/grade levels were represented in the studies, and that the vast majority of studies revealed positive associations between Yoga and ESI, the findings encouragingly suggest that Yoga might serve as useful ESI-promoting intervention among a significant spectrum of developmental stages associated with childhood and youth among both major genders. However, given that the association between Yoga and ESI is contingent upon the stage of development that children may be in

(as noted previously), this indicates that more focused research might be required to better understand the exact way in which Yoga impacts ESI and EQ among children of different genders in specific developmental stages.

Whilst the reviewed studies exhibited a bias towards Western and Caucasian samples (likely as an artefact of the selection criteria that were biased towards articles written in English, but possibly also due to a lack of familiarity, popularity, and/or interest in either ESI or Yoga (or both)), a sufficient number of the scoped studies also included non-Western and non-Caucasian samples to suggest that the positive associations reported between Yoga and ESI/EQ may be cross-culturally significant and valid. This suggests that Yoga holds promise as an intervention that could be employed in a large variety of contexts. Furthermore, given that most of the reported interventions were conducted over the span of less than a year, the findings suggest that empirically verifiable improvements to ESI could result from relatively brief Yoga interventions.

Furthermore, the findings emanating from the review suggest that Yoga is not only generally associated with ESI development among non-clinical children and youth populations, but that it may be of significant value in supporting ESI development among youth with a variety of presenting problems such as social and behavioural problems, substance abuse, autism, trauma, obesity, ADHD and other psychiatric conditions.

Regarding Yoga styles, Hatha Yoga was the most predominantly featured style, comprising the proportional majority of the studies that were reviewed. Integrated, Kripalu, Kundalini, Ashtanga and Iyengar Yoga constituted a smaller proportion of Yoga styles that had been reviewed. Relatedly, breath and posture were the core techniques that were studied in the majority of studies. This may merely be reflective of the fact that Yoga in the West most commonly take the form of Hatha Yoga and is often confined to physical postures and

breath control (Newcombe, 2009). These findings concur with such a statement, illustrating the need for future research with other Yoga styles and techniques.

4.1 Implications of the findings.

By integrating findings from existing research into the context of an overall framework of ESI, this scoping review provides an integrated and consolidated overview not only of the relationship between Yoga and ESI competencies among children and youth, but also provides a broader perspective on the association between Yoga and EQ as an overall construct. In this regard, the findings underscore the potential and value of Yoga to support the development of certain ESI competencies that lead to EQ, among children and youth. The thematic analysis assisted in extracting the main and minor ESI themes that were pertinent to Yoga in children and youth. This served to highlight that the main themes of intrapersonal, stress management, interpersonal and general mood were linked to Yoga, in children and youth. In addition to these main themes, the subthemes that were connected to Yoga included impulse control, stress tolerance, interpersonal relations, self-awareness, self-regard, independence, optimism and happiness. This thematic analysis primarily suggested that Yoga interventions were linked to 4/5 (80%) of the main themes and 8/15 (53.3%) of the subthemes of ESI. Theoretically, this demonstrates that Yoga interventions are likely specifically associated with these particular ESI competencies.

More specifically, from the results of these included studies, Yoga interventions were positively correlated to the main intrapersonal, stress management and general mood themes, as well as the minor subthemes of impulse control, self-regard, self-awareness, stress tolerance, interpersonal relations and happiness. These positive associations imply that Yoga interventions could successfully contribute in enhancing these specific dimensions of ESI, as well as various dimensions of well-being, among children and youth.

From the scoping review, it is also suggested that Yoga interventions can effectively include numerous styles and core techniques. Additionally, Yoga can be successfully implemented in numerous grades and with a variety of age groups, races, genders, conditions, and schooling levels. The findings suggest that Yoga interventions are likely to be cross-culturally valid in enhancing ESI-related competencies, and that it does so among children and youth of both main genders who may be at a variety of different levels of psycho-social development. In terms of practical implications, this suggests that researching and implementing Yoga-based programs could have beneficial outcomes in a wide variety of settings and among a variety of different youth populations. These preliminary findings could have implications for the Yoga teachers, therapists, education administrators, stakeholders, policy makers and educators that develop and design educational practices as well as policies. Such findings could in turn hold promise for the future development of Yoga-based SEL programs that enhance certain ESI competencies towards PYD.

4.2 Limitations of the study.

The present scoping review only included academic, peer-reviewed and scientific literature. In this manner, grey literature was excluded from the study. However, such literature could have made important contributions, filled in the literature gaps and reduced bias. In terms of grey literature's potential, its exclusion could thus be regarded as a potential limitation. However, this potential limitation was considered when formulating the selection criteria and deemed to be counterbalanced by the identified need to obtain an initial overview of findings derived from empirical, peer-reviewed studies.

Additionally, a quality appraisal of the individual research articles through collaborative efforts was not conducted. Regarding this, a lack of quality appraisal and collaboration might have compromised the study's reliability, validity and objectivity. However, most scoping

reviews aim to obtain an overview of the topic in question, with the aim of identifying gaps and directions for future research, and as such, quality appraisals are typically not conducted in the context of scoping reviews (Levac et al., 2010).

In a similar vein, a group approach that involved multidisciplinary teams could have possibly enhanced the credibility and trustworthiness of the scoping review. However, the limitation of working alone is unavoidable with regard to individually conducted postgraduate research.

A further limitation of the scoping review was that the researcher is a Yoga teacher. In particular, the researcher might have preconceived notions on the value of Yoga that might not be empirical in nature. However, by following a set framework for conducting the review, and documenting all steps in accordance with PRISMA guidelines, it is hoped that this limitation has been addressed.

Finally, given that the review excluded all non-English literature, the findings may likely exhibit a cultural bias towards English speaking populations and cultures, and may underrepresent findings made in relation to Yoga and ESI/EQ in non-English speaking contexts.

4.3 Recommendations for future research.

The findings of this study lend themselves towards future research recommendations through the identification of gaps and trends. Researchers could pay more specific attention to investigating the main and minor ESI themes that did not feature significantly in the included literature, paying specific attention to the competencies that did not feature at all. Future research could also pay special attention to further investigating the themes and subthemes that emerged from the literature but showed no association to Yoga. In this manner, future studies could also aim at elaborating and adding to existing research, in order

to obtain a more comprehensive overview of which dimensions of ESI are most or least associated with Yoga practices.

The current scoping review indicates an escalation in the publication of articles from the year 2010 and onwards, with a notable boom in publications over the last two years. Such a trend indicates that the field is burgeoning, viable, and promising as an avenue for future research.

With regard to the age of research participants, the present scoping review shows that this average age was approximately eleven years. It is, therefore, suggested that future studies focus on research with younger children and older youth.

Relative to the participant's grade and schooling level, which tended to be mixed in most studies, the scoping review demonstrates that future research should focus on studying specific grades and levels, to provide more detailed accounts of the association between Yoga and ESI development in relation to specific psychosocial stages of development (Glowiak & Mayfield, 2016a; Orton, 1997; Tummers, 2009).

The bulk of included research also involved Yoga interventions principally taking place in under a year, with sample sizes of less than one hundred. Relative to this, future studies could focus on increasing the number of participants in the context of longer-term longitudinal studies. This would enhance generalisability of the findings and would also increase understanding of the long-term benefits of Yoga practice for ESI development.

Given the emphasis on quantitative and mixed methods studies in the scoped articles, as well as the intricate and complex interrelationships between ESI dimensions, it appears that there might be significant benefit in conducting more focused, qualitative studies.

Phenomenological studies may be of particular use in better understanding how Yoga practice is perceived and experienced by children and youth, to shed light on the mechanisms involved in translating such Yoga practice into ESI-related gains.

Regarding culture and race, the research participants of the current scoping review were primarily from Western countries and proportionally predominantly Caucasian. As such, there might be value in future studies that examine the cross-cultural validity, similarities and potential differences related to Yoga interventions on the ESI development of children and youth.

The review also indicated that most studies focused on the Hatha style of Yoga and on breathing and postural practices. This suggests that a need exists to better research other styles of Yoga and other Yoga practices. It may well be that due to differing approaches to practice, that different styles of Yoga might affect ESI development in differential ways.

It appears that various well-being domains are also associated with Yoga interventions. This could provide a future research opportunity in terms of exploring the well-being domains that are connected to ESI competencies. These and other recommendations will ultimately be discussed in greater detail in chapter 3.

5 Conclusion

The main aim of this study was to collect, categorize, summarize and synthesize the dispersed literature that connects Yoga, ESI and EQ in children and youth. This involved conducting a scoping review of the literature, to include twenty-four articles in the final thematic analysis and charting of data. According to the scoping review, various main and minor ESI themes of Bar-On's (2006) model were evident in the Yoga literature, with many of these themes positively associated to Yoga practice among children and youth. Additionally, from the data that was charted, numerous gaps and trends were identified regarding publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques and well-being domain. Such a detailed account of the data provides opportunities for future research and progress in these fields. All in all, the findings offer preliminary

insight into the relationship between Yoga and Bar-On's (2006) ESI model, providing detailed data on these connections. Such a study could ultimately spark an academic discussion on Yoga's potential to contribute to SEL programs that develop ESI competencies towards improving EQ along with PYD.

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Chapter 3

Conclusions, Limitations and Recommendations

3.1 Study summary.

The study identified the need for contemporary children and youth to acquire the capacity to Transform, Adapt, Cope and Develop (TACD), in order to more effectively adjust to the challenges encountered within a modern world. In an effort to address this need, there has been an increase in Social and Emotional Learning (SEL) programs that focus on developing Emotional-Social Intelligence (ESI) towards Positive Youth Development (PYD) (Shek, Sun, & Merrick, 2012).

Research progressively demonstrates that a range of ESI related benefits are associated with the practice of Yoga, with Yoga increasingly playing a role in SEL programs. ESI ultimately prepares young people with a capacity to TACD with the competencies of ESI connected to the practice of Yoga. As a practical mediation towards PYD, Yoga interventions are cost-effective, easy to implement and can be adjusted and modified according to the age group, setting, skill level, developmental level and specific needs of individuals (Bayley-Veloso & Salmon, 2016; Kaley-Isley, Peterson, Fischer, & Peterson, 2010; Semwal, Juyal, Kishore, & Kandpal, 2014). Such a comprehensive, malleable and practical intervention could aptly contribute towards fulfilling the need to increase ESI in children and youth.

However, the literature that links Yoga to these dimensions of ESI is spread across academic disciplines, with a lack of direct focus between Yoga and ESI. In response to this gap, a scoping review aimed at bringing greater coherence to isolated and dispersed literature piecing the research together towards greater integration, insight and future progress in the field. Academically speaking, the first step towards investigating Yoga and ESI in the context of SEL programs and PYD was to review the existing scope of literature.

Relative to this, the scoping review aimed to discover the relationship between Yoga and the specific ESI competencies of Bar-On's (2006) model. The objective of the study being to condense the vast expanse of dispersed data into a consolidated summary. In this regard, the scoped literature was thematically analysed and mapped to expose evidence gaps and explore relationships. Such an integrated review served to initiate an academic discussion on the connections, themes, mechanisms, gaps and topics in need of greater research. Future research recommendations were then made towards furthering the development of Yoga-based SEL programs for PYD.

As a framework for the scoping review, Arksey and O'Malley's (2005) method was applied to the study. Relative to this, two databases (Web of Science and Scopus) were searched to extract the literature that was published in the English language from the year 1995, and which conformed to the predetermined inclusion and exclusion criteria stipulated for the study. A combined total of 1621 articles were extracted from these databases and further screened by topic or title, abstract and keywords. All articles that did not include the term Yoga, were not open access, were not in the format of an article, were not in the English language and were not from the year 1995 and onwards were excluded. In addition to this, all duplicates were removed with a total of 115 articles remaining. These articles were then screened for eligibility with 75 full-text articles remaining. These full-text articles were then assessed for final eligibility according to the set inclusion criteria with 24 articles meeting the complete selection criteria and consequently included in the scoping review. These 24 articles were subsequently analysed using data charting and thematic analysis.

From the thematic analysis of these relevant articles, ESI themes and subthemes emerged. These themes and subthemes together with other pertinent data, were categorically mapped as a contextual summary of the key characteristics of the included literature.

Various data patterns emerged from the pertinent data and were grouped according to the ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques and well-being domain.

The results collected from the scoping review provide a convincing argument in terms of Yoga's value in the context of the development of ESI competencies among children and youth. These results, which were thematically analysed and charted as data are summarised below. From the thematic analysis the main themes that emerged were from the intrapersonal, stress management, interpersonal and general mood domains. The most salient subthemes that were evident in the included literature were self-awareness, self-regard, independence, impulse control, stress tolerance, interpersonal relations, optimism and happiness. Out of these main and minor ESI themes, the literature demonstrated positive associations between Yoga and self-regard, self-awareness, interpersonal relations, general mood, happiness, stress management, interpersonal competency, impulse control and stress tolerance.

In addition to the ESI themes and subthemes that the Yoga literature was linked to, the data chart included the ESI themes and subthemes, publication year, average age, grade, sample size, race, gender, condition, school level, setting, country, facility type, Yoga style, methodology, results, duration, sessions, core techniques and well-being domain. The main findings that emerged from the charting of this data are briefly summarised below. According to the charted data regarding the year published, a significant spike in research occurred between 2010-2018 on Yoga and ESI in children and youth. The included research came predominantly from the West, namely USA, and were of mixed methods and quantitative research designs. From the included literature, the combined average age of research participants was 11.10 years, with the majority of participants Caucasian in race and of mixed genders, conditions, grades and schooling levels. The sample sizes were predominantly less

than one hundred, with interventions occurring over the duration of less than a year and taking place in mainly school settings as well as public facilities. Hatha Yoga was the most predominant style used in the literature, with breath and posture as the core techniques. Lastly, the majority of included articles were positively associated with numerous well-being domains.

The findings suggest that the practice of Yoga has the potential, in varying degrees, to contribute to both the main and minor dimensions of ESI in children and youth. Additionally, a detailed data chart both conceptualises and contextualises this existing relationship between Yoga and ESI. In this way, the present scoping review has achieved the aim that was set out at the start of the study by comprehensively highlighting the links, gaps and trends that could lead to more focused studies and future interventions.

3.2 Conclusions.

Modernity requires greater effort towards balancing the external pursuit of material possession with a more internal search for self-knowledge and competency. Contemporary societies, therefore, require youth to have the capacity to Transform, Adapt, Cope and Develop (TACD), with emotional resources and social competencies that increase Emotional Intelligence (EQ) at the forefront of such development. Ultimately, developing EQ through Emotional-Social Intelligence (ESI) based interventions, such as Yoga, positively contributes towards an individual's ability to TACD. Corresponding to this, improved EQ levels further support the development of ESI skills to spark a sequence of flourishing (Bar-On, 2006).

Although an innate, developable trait, EQ requires the cultivation of ESI competencies throughout the developmental stages by means of education and training (Bar-On, 2010; Goleman, 1996). As such, these intrinsically developable traits need to be nurtured through interventions that promote these competencies. Yoga is a practice that has been shown to nurture emotional-social skills, with improvements to the ESI domains corresponding to an

increase in the developable trait of EQ. In essence it was proposed that Yoga could be linked directly to the ESI competencies of Bar-On's (2006) model, with a scope of the literature presented to explore this relationship. The findings of the scoping review support this notion and indicated that Yoga is indeed associated with many ESI related competencies. In particular, the main ESI themes that surfaced from the Yoga literature were from the intrapersonal, stress management, interpersonal and general mood domains. Additionally, the minor subthemes that emanated from included articles were self-awareness, self-regard, independence, impulse control, stress tolerance, interpersonal relations, optimism and happiness. More specifically, from these main and minor ESI themes that emerged from the included articles, those that demonstrated positive correlations with Yoga were self-regard, self-awareness, stress management, impulse control, stress tolerance, interpersonal competency, interpersonal relations, general mood and happiness.

However, independence, optimism and the intrapersonal competency were not reported to be associated with Yoga in the literature that was reviewed. According to these findings, Yoga does then seem to hold value for supporting the development of ESI, particularly in relation to self-regard, self-awareness, stress management, impulse control, stress tolerance, interpersonal competency, interpersonal relations, general mood and happiness. Relative to this, Yoga supports the development of ESI somewhat less so in relation to independence, optimism and the intrapersonal competency.

The findings related to the relations between ESI and Yoga, also serve to underscore the potential value of Yoga as a potential Social and Emotional Learning (SEL) program for Positive Youth Development (PYD). In the same manner as SEL programs, Yoga has been shown to develop ESI skills through a comprehensive and active practice that can extend into classroom routines, using various techniques and styles to develop competencies.

As a practice that also transcends age, culture as well as socioeconomic borders Yoga is a cost-effective, easily executed, universally relevant intervention that can be modified according to the setting, skill level, age group, developmental level and specific needs of its participants (Bayley-Veloso & Salmon, 2016; Kaley-Isley et al., 2010; Semwal et al., 2014). Further research towards developing these ESI dimensions through Yoga-based SEL programs could positively underwrite future curriculums that increase EQ for PYD.

Although still in its infancy, the review revealed that research on Yoga's relationship to ESI competencies in children and youth is a burgeoning field, as is evident in the exponential growth of literature since the year 2010. While Yoga has still not been linked directly to all the competencies of ESI, and more research is required into the possible association between Yoga and the ESI competencies of independence and optimism, it is hoped that the present scoping review would serve as a useful springboard for future research efforts. Given the Western slant that was evident in the reviewed studies, it is also hoped that multidisciplinary conversations that include the East and Africa will ignite a flow of further ideas towards positive and global youth development that draws on Yoga's association with the various dimensions of ESI.

3.3 Limitations of the study.

As the review aimed to focus on peer-reviewed studies, grey literature such as letters, books, book chapters, poster and meeting abstracts, proceeding papers, formative research, corrections as well as citations were excluded from the study. However, grey literature does have the potential to make important contributions to reviews, providing a balanced perspective on the available evidence; extending the range of data and filling in the literature gaps to reduce publication bias (Adams, Smart, & Huff, 2017; Paez, 2017; Tricco et al., 2016). As a result, a limitation of the study is that relevant grey literature might have been

omitted. Nevertheless, for the purpose of the present study, in the context of such a preliminary investigation into the relationship between ESI and Yoga, the decision to limit the review to peer-reviewed sources seems sufficiently warranted. Such a novel and underexplored relationship requires credible and valid scientific articles to form a strong basis for future studies (Jordan, Pope, Lambrou, Malla, & Iyer, 2017). Thus, to begin with the more subjective or anecdotal grey literature is pushed aside in favour of firstly taking a conservative stance to objectively review the scientific literature.

As the aim of the study was to map the existing scientific literature on the relationship between Yoga and the competencies of ESI, a quality appraisal of the articles as is expected in a systematic literature review was deemed unnecessary (Levac et al., 2010). In addition to this, stakeholders were not consulted during the research process. Such collaboration in addition to quality appraisal offers greater objectivity, value, expertise, validity and certainty in line with study procedures (Levac et al., 2010). Such a lack in terms of quality appraisal and collaboration, therefore, limits the study's reliability given that findings from individually conducted research may lack the internal consensus of other researchers within the quality appraisal process. However, as the purpose of a scoping review is to obtain an initial overview of the span of available literature, it typically does not require the quality appraisal of included studies or consultations with stakeholders (Levac et al., 2010).

Although not mandatory in scoping reviews, Levac et al. (2010) state that as part of stage three, a group approach is highly recommended, with multidisciplinary teams engaged in all aspects of decision making and the consensus thereof. Such a team effort ultimately restricts the subjective bias of a singular researcher on data for more objective interpretations. Conversely, meticulous documentation in terms of a transparent, systematic and auditable approach ensures the trustworthiness of individual study findings to assure the accurate representation of aggregate individual studies (Whittemore et al., 2014).

Although the research was meticulously documented, having only one researcher limits the credibility, trustworthiness and validity of the review. However, in the context of postgraduate research, which is intended for assessment, explicit requirements exist that require candidates to conduct their research individually, and as such, this was an inevitable constraint imposed on the study.

An additional potential limitation derives from the fact that the researcher is a Yoga teacher and may, thus, hold pre-conceived ideas pertaining to the value of Yoga that may not be empirically based. This potential limitation was ultimately mitigated through strict and pedantic adherence to the scoping process guidelines and structures stipulated by Arksey and O'Malley (2005), Braun and Clarke (2006) as well as Levac et al. (2010). At the same time the researcher strove to attend to these key components of the study with objectivity and integrity. In line with this, descriptive tables in the form of data charts were constructed as evidence maps to standardize the reporting of results, describing studies with enough detail to allow for subsequent replication in future research (Coe et al., 2014; Pollmann, Murphy, Bergman, & Gardner, 2015).

In terms of cultural bias, only articles published in the English language were included, which would potentially have resulted in a relative bias towards non-English research and the differing cultural contexts associated with it. This bias is reflected in the fact that studies conducted in African countries made up only 4.2% of the reviewed studies, with 25% derived from the East and the vast majority of articles extracted from the West (71%). Such unequal allocation favours a Western mentality, with the originally Eastern practice of Yoga deprived of a more contextual interpretation. Such a Western orientation and application is thus contextually limited, offering only a marginal perspective on Yoga interventions for ESI among children and youth. This, for the most part, potentially excludes valuable insights and cultural understandings that may be reflected in Eastern research.

The practice of Yoga is imbued with these unique cultural understandings and expressions, and as such, the lack of inclusion of especially Eastern studies is a limitation that needs to be addressed in future research.

These various limitations as well as the strengths discussed above should be taken into consideration when designing future studies. As the primary intention of a scoping review is to summarise understandings and make recommendations (Arksey & O'Malley, 2005), a scoping review such as this should be considered a mere steppingstone towards larger studies. In this manner, it presents an initial map of the depth, range and nature of the literature, and serves to unveil connections between variables, evidence gaps, trends and limitations. This could in turn provide direction towards future systematic reviews and further research.

3.4 Recommendations for future studies.

The findings of this study lend themselves towards proposing future research recommendations. Firstly, regarding the present scope of articles, it was found that numerous main and minor ESI themes were not mentioned in any of the articles on Yoga interventions. The main and minor ESI themes that were absent in the included literature were adaptability, self-actualisation, social responsibility, assertiveness, empathy, reality-testing, problem-solving and flexibility. Additional ESI competencies that barely featured in the scoped literature were happiness, optimism and independence. This presents a gap in the literature and indicates that future research on Yoga could focus on including these absent or underrepresented ESI competencies with children and youth.

Scientifically based research could also explicitly focus on the main and minor ESI themes of independence, intrapersonal competency and optimism that emerged from the literature but showed no correlation to Yoga. The scoping review, therefore, serves to highlight the main and minor ESI themes that are in need of additional empirical research, which may in turn

support endeavours aimed at developing empirical, Yoga-based SEL programs based on ESI for PYD.

As discussed previously, the main and minor ESI themes are often interrelated and interdependent, with growth in one competency often leading to progress in another competency. These workings should be explored further in future research that examines the intricate interconnections of the ESI competencies in the context of Yoga interventions. This could provide a more global and holistic perspective on ESI, as the sum of its competencies, with Yoga interventions structured accordingly.

The current scoping review indicates an escalation in articles, from the year 2010 and onwards, with Yoga-based studies that allude to main and minor ESI themes with children and youth, on the rise. Such a trend indicates that this is a promising research field, and thus represents a fruitful avenue for researchers interested in ESI development among children and youth.

Regarding the age of research participants, the present scoping review shows that the average age was roughly eleven years. However, the current review focussed on the ages between seven and twenty-four, and so it is suggested that future studies focus on research with younger children and older youth as well as with all other age groups, given that they might be in different developmental stages, and therefore be impacted differently by Yoga interventions in relation to the dimensions of ESI.

In a related fashion, future Yoga-based SEL programs that focus on ESI development should be implemented and assessed according to the specific developmental ages, stages and milestones of research participants. Hence, it is recommended that future Yoga-based SEL programs are designed to serve the unique needs of youth in communities and applied according to a developmental framework. In accordance to this, and as previously mentioned, intervention programs with children and youth would need to consider their developmental

stages and milestones, with a different focus at each grade level (Sullivan, Sutherland, Farrell, & Taylor, 2015). As ESI has been shown to increase with age (Bar-On, 2006), adjustments to Yoga-based interventions could take place in line with the developmental models of Jean Piaget and Erik Erikson (Glowiak & Mayfield, 2016a; Orton, 1997), along with Tummers (2009) who specifically suggests adapting Yoga interventions to correspond with the appropriate indicators of development.

Given the related limitation that most of these Yoga interventions took place over the span of less than a year, in order to adequately research Yoga and ESI in the context of child and youth development, it is recommended that researchers embark on longitudinal as well as follow-up studies that intermittently monitor research participants. In light of this, Yoga-based SEL programs should be viewed as a process of continual development towards enhancing pre-existing strengths and skills (Newman & Dusenbury, 2015).

Relative to the participant's grade and schooling level, the scoping review indicated that studies were done with a mixture of grades and schooling levels. This demonstrates that future research should focus on studying specific grades and levels, to provide more detailed developmental accounts of research participants regarding ESI and Yoga interventions.

The majority of the included research involved sample sizes of less than one hundred. Relative to this, future studies could focus on increasing the number of participants in studies to enhance the generalisability of results.

In addition to this, it was noted that the bulk of the studies were of a mixed method and quantitative research design, with qualitative research somewhat underrepresented. Qualitative research is used to elaborate on, refute, confirm and complement the findings of quantitative studies (Brannen, 2005).

In this way, qualitative studies might supplement existing research by offering more detailed accounts on participant's perspectives, explaining quantitative findings and providing rich descriptions (Brannen, 2005; Schonfeld & Farrell, 2010). In this way, future qualitative studies could provide more in-depth accounts and advanced understandings of the personal experiences of children and youth. For this reason, it is suggested that qualitative research features more prominently within future studies to enhance and supplement existing research.

Regarding race, the research participants of the current scoping review were primarily Caucasian. In terms of this, it is suggested that future research includes multifarious racial groups to provide a more realistic representation of the general global population.

In relation to gender, the included literature is comprised of predominantly mixed genders. Future research could possibly investigate different genders in separate studies. This could assist in providing further research on the similarities and differences that exist in the studies of different genders. Furthermore, this could in turn provide insight into developing specific Yoga-based SEL programs to develop ESI competencies according to different gender specific needs.

In many of the included studies, the presenting condition of the research population was unspecified. Future research could possibly aim at including special population groups, to extend the research towards numerous conditions, potentially demonstrating how Yoga and ESI could specifically benefit these groups. Additionally, with the included research occurring mainly in a school setting, a wider variety of settings should also be incorporated in future studies.

In connection to country, a large proportion of the studies were from the West, exhibiting a predominantly Western perspective. As such it is imperative to include other non-Western countries and contexts in future research. This can assist in providing a more global perspective on ESI and Yoga in children and youth. The wealth of knowledge that stems from

the origins of Yoga in the East should be reviewed more closely to determine its relation to ESI from a non-English speaking world and perspective. In this regard, it is recommended that an Eastern understanding of Yoga's cultural precepts be included in future research on the applicable emotional and social competencies. This could in turn provide a wider scope and more contextualised understanding of Yoga's potential application in developing ESI within children and youth. On a global scale, collaboration between English and non-English speaking scientific research departments will exponentially increase the academic evidence base.

Although numerous styles of Yoga were mentioned in the articles, Hatha Yoga was the predominant style that was investigated. Relative to the current scoping review, key styles were left unmentioned or were scarcely studied, including Restorative and Ashtanga Yoga. This presents a gap in the literature, with a wider range of Yoga styles in need of future and further research. These future studies could expand on existing knowledge by offering greater insight into the benefits and strengths of all Yoga styles in improving ESI with children and youth.

Additionally, the current trend according to the scoping review's charted data is that breath and posture are the core techniques of most Yoga interventions. Relative to this, all Yoga techniques should be examined as well as the unique compilations thereof in establishing the most effective sequences for Yoga-based SEL programs that improve ESI for PYD.

From the scoping review, it appears that various well-being domains are associated with Yoga interventions. This could provide a future research opportunity in terms of further investigating the well-being domains that are linked to specific ESI competencies.

In conjunction with this, a collaborative approach is required to cultivate a quality appraisal process to further advance the validity and reliability of future systematic reviews

and studies. A boost to the validity and reliability of studies is supplemented through the inclusion of multidisciplinary teams (Daudt, van Mossel, & Scott, 2013; Levac et al., 2010). At the forefront of such academic partnership, these multidisciplinary teams should involve Yoga teachers, therapists, education administrators, stakeholders, policy makers, educators and the like in the development of practice and policy for educational programs that lead to PYD. These educational policies should ultimately support the use of school-based intervention programs and SEL initiatives in both public and private sectors. In this way, schools can establish time-based PYD policies that allocate time for Yoga-based SEL programs.

These policies and interventions could ideally be founded on a strength-based, developmental and primary preventative perspective (Lerner, Almerigi, Theokas, & Lerner, 2005). An increase in systematic reviews and Randomised Control Trials of Yoga-based SEL intervention programs will assist in creating a solid foundation of empirical evidence. These evidence-based Yoga programs can then be implemented through global training initiatives that aim to reduce the burden on healthcare by providing preventative, easily implemented, low-cost interventions to students in educational settings (Kaley-Isley et al., 2010; Sullivan et al., 2015). This ultimately supports primary preventative school policy that focuses on the mental health, well-being and care of students as well-rounded future citizens. Such collaboration should aim at further understanding and enhancing PYD through Yoga, with a common interest in applying research to intervention programs and policies that promote the thriving of youth and positive social change (Lerner et al., 2005).

As such, the current scoping review provides an initial comprehensive compilation and integration of the fragmented literature that relates Yoga to the competencies of ESI. This allows for the easy identification of literature connections, gaps and trends that permit future research and further progress in these fields. A map that shows the way.

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[illegible]

Appendix B: ENTREQ Statement Table

No	Item	Guide and description
1	Aim	State the research question the synthesis addresses.
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis and describe the rationale for choice of methodology (<i>e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis</i>).
3	Approach to searching	Indicate whether the search was pre-planned (<i>comprehensive search strategies to seek all available studies</i>) or iterative (<i>to seek all available concepts until they theoretical saturation is achieved</i>).
4	Inclusion criteria	Specify the inclusion/exclusion criteria (<i>e.g. in terms of population, language, year limits, type of publication, study type</i>).
5	Data sources	Describe the information sources used (<i>e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists</i>) and when the searches conducted; provide the rationale for using the data sources.
6	Electronic Search strategy	Describe the literature search (<i>e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits</i>).
7	Study screening methods	Describe the process of study screening and sifting (<i>e.g. title, abstract and full text review, number of independent reviewers who screened studies</i>).
8	Study characteristics	Present the characteristics of the included studies (<i>e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions</i>).
9	Study selection results	Identify the number of studies screened and provide reasons for study exclusion (<i>e.g., for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications to the research question and/or contribution to theory development</i>).
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (<i>e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings</i>).
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (<i>e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting</i>).
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.
13	Appraisal results	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.

14	Data extraction	Indicate which sections of the primary studies were analyzed and how were the data extracted from the primary studies? (<i>e.g. all text under the headings “results /conclusions” were extracted electronically and entered into a computer software</i>).
15	Software	State the computer software used, if any.
16	Number of reviewers	Identify who was involved in coding and analysis.
17	Coding	Describe the process for coding of data (<i>e.g. line by line coding to search for concepts</i>).
18	Study comparison	Describe how were comparisons made within and across studies (<i>e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary</i>).
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs and identify whether the quotations were participant quotations or the author’s interpretation.
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (<i>e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct</i>).