

**A mixed methods study of the current and potential
future use of yoga in schools to enhance social and
emotional wellbeing of primary school-aged children
in Northern Ireland**

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Dedication

To Cherie and Jaxon, whose love, laughter, and patience filled the spaces left by every page I wrote away from home.

To my mum and dad, who grounded me with the basic principles I still carry.

And to my mother and father-in-law, whose steadfast support helped make this journey possible.

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This work, though authored by one, is borne from the support and sacrifice of many.

YNWA.

Summary

This doctoral thesis investigates the feasibility, acceptability, and contextual challenges of integrating yoga in Northern Ireland (NI) primary schools to support children's social and emotional wellbeing (SEW). Amid rising concerns over youth mental health and the need for universal, non-stigmatising interventions, yoga has emerged as a promising but underexplored practice within UK educational settings. This research addresses a gap in evidence relating to its integration in the specific socio-political and cultural context of NI. The study was conceptually grounded in Bronfenbrenner's Ecological Systems Theory (EST), with the later application of his Bioecological Model (PPCT), enabling a multi-level analysis of the factors shaping yoga's reception and impact in educational settings. A sequential mixed-methods design was employed. Phase One involved a scoping questionnaire completed by 93 primary schools to map current provision and identify perceived barriers and enablers. Phase Two adopted a single case study design with two embedded units of analysis, two schools, where interviews were conducted with principals, teachers, pupils, and yoga instructors (n=18). Qualitative data were analysed using Reflexive Thematic Analysis. Yoga was perceived as a cost-effective, adaptable strategy for enhancing self-regulation, resilience, and classroom engagement, particularly in the post-pandemic context. Breathwork, mindful movement, and guided stillness emerged as core components, with self-regulation identified as the central mechanism of change. However, implementation was shaped by religious sensitivities, staffing constraints, curriculum pressures, and unequal access. The study offers original contribution through the development of a flexible context-sensitive intervention model with built-in design safeguards, the application of a socioecological lens to intervention design, and the inclusion of children's voices in shaping understandings of yoga as an embodied wellbeing tool. The thesis concludes with policy, practice, and research recommendations, and a reflexive account of the researcher's positionality. It advocates for inclusive, developmentally appropriate, and contextually responsive approaches to wellbeing in education.

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Glossary of Abbreviations

Abbreviation	Term
ACE	Adverse Childhood Experience
AQE	Association for Quality Education (academic transfer assessment)
CAMHS	Child and Adolescent Mental Health Services
CASEL	Collaborative for Academic, Social, and Emotional Learning
CBT	Cognitive Behavioural Therapy
CCMS	Council for Catholic Maintained Schools
CCEA	Council for the Curriculum, Examinations and Assessment
CDC	Centres for Disease Control and Prevention
CFS	Common Funding Scheme
COVID-19	Coronavirus Disease 2019
CYP	Children and Young People
DENI	Department of Education Northern Ireland
DHS	Doctor of Health Studies
DoH NI	Department of Health Northern Ireland
EA / EANI	Education Authority (Northern Ireland)
EST	Ecological Systems Theory
FSME	Free School Meal Entitlement
GBANI	Governing Bodies Association Northern Ireland
GDP	Gross Domestic Product
HPS	Health Promoting Schools
IRB	Institutional Review Board
MBI	Mindfulness-Based Intervention
MBSR	Mindfulness-Based Stress Reduction
MLA	Member of the Legislative Assembly
NI	Northern Ireland
NICCY	Northern Ireland Commissioner for Children and Young People
NIMDM	Northern Ireland Multiple Deprivation Measure
OECD	Organisation for Economic Co-operation and Development
PA	Physical Activity
PE	Physical Education

Abbreviation	Term
PDMU	Personal Development and Mutual Understanding
PHA	Public Health Agency (Northern Ireland)
PIS	Participant Information Sheet
PPTC	Post-Primary Transfer Consortium
PPCT	Process–Person–Context–Time (Bioecological Model)
PSHE	Personal, Social, Health and Economic Education
PTSD	Post-Traumatic Stress Disorder
QoL	Quality of Life
RCT	Randomised Controlled Trial
RQ	Research Question
RTA	Reflexive Thematic Analysis
SEL	Social and Emotional Learning
SEW	Social and Emotional Wellbeing
SEN	Special Educational Needs
SES	Socioeconomic Status
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
UNCRC	United Nations Convention on the Rights of the Child
URN	Unique Reference Number
WHO	World Health Organization

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Chapter 1: Introduction

1.1 Background and introduction of yoga as a social and emotional learning intervention

The promotion of social and emotional wellbeing (SEW) in children has become increasingly recognised as an important topic within educational and public health research, policy and practice (van Poortvliet et al. 2019; Public Health England & Department of Health 2021; World Health Organisation 2023; Cassidy 2024). Within this context Social and Emotional Learning (SEL) has been recognised as a key component in developing emotional resilience, nurturing mental health, and enhancing academic performance (Mahoney et al. 2021; Durlak et al. 2022). As awareness grows regarding the significance of mental health and emotional regulation in early childhood (Nigg 2017), attention is shifting toward interventions beyond traditional classroom-based approaches. Yoga, in particular, has gained attention as a potential tool for enhancing SEL in school settings (Butzer et al. 2015b).

1.1.1 Conceptualising social and emotional wellbeing, mental health, and emotional regulation

The terms ‘emotional wellbeing’, ‘social and emotional learning’, and ‘mental health’ are often used interchangeably in policy and practice, yet each concept holds distinct theoretical and practical implications (NICE 2008). Mental health is frequently understood through a clinical lens, focused on identifying symptoms and diagnoses, while wellbeing tends to refer to broader experiences of life satisfaction and optimal functioning. This distinction is supported by Moore et al. (2020b), who highlight that wellbeing often encompasses how young people experience and evaluate their lives overall; whereas mental health is more typically framed in relation to psychological symptoms and disorders. The World Health Organisation (2018) defines mental health as a positive state in which individuals can realise their potential, manage daily stresses, and contribute meaningfully to their communities. Similarly, the Mental Health Foundation (2023) emphasise that individuals may experience mental health challenges while maintaining overall wellbeing, shifting the focus from pathology to coping and adaptive capacity.

It is therefore important to distinguish between transient emotional responses to life's challenges, such as sadness, anxiety, or stress, and clinically diagnosable mental health conditions, which involve sustained distress and significant impairment across social, academic, or occupational domains (American Psychiatric Association 2013; Mental Health Foundation 2023). This distinction remains the subject of ongoing debate, particularly in relation to whether mental health and wellbeing represent two ends of a continuum or function as two overlapping but distinct constructs (Moore et al. 2020b). For example, individuals with chronic mental illness may nonetheless report high levels of subjective wellbeing when their condition is well managed (Magyar and Keyes 2019). Understanding this conceptual nuance is essential for interpreting prevalence data and informing the design of effective interventions. Mental health challenges are widespread, affecting one in four adults and one in five children (Mind 2024). Nonetheless, many young people do not seek help, particularly in environments where emotional fatigue and psychological distress are normalised within school or family culture (Mind 2017). This reluctance to engage with support services is especially concerning. Up to 50% of lifetime mental disorders emerge by age 14 (Kessler et al. 2007; Betts and Thompson 2017), highlighting the need for early and context-sensitive approaches to mental health and wellbeing in childhood.

Within this thesis, social and emotional wellbeing refers to a child's capacity to understand and regulate emotions, form and maintain positive relationships, demonstrate empathy, and navigate social environments in ways that support both personal and collective functioning (Bayley et al. 2022). While often used interchangeably with terms such as 'mental health' and 'wellbeing', social and emotional wellbeing are conceptualised here as a specific set of developmental outcomes that can be nurtured through structured approaches such as SEL. SEL refers to the educational processes through which children acquire core competencies, including emotional regulation, responsible decision making, and interpersonal awareness (Dermody et al. 2022).

In this framing, SEL serves as the means, while social and emotional wellbeing represents the intended outcome (Greenberg et al. 2017). Both are shaped by, and contribute to, broader understandings of mental health. Central to these processes is emotional regulation, the ability to recognise, monitor, and modify emotional responses in ways that are adaptive and contextually appropriate. This includes the ability calm down under stress,

sustain focus when frustrated, and respond constructively to challenges (Sanchis-Sanchis et al. 2020). Accordingly, this thesis adopts a view of social and emotional wellbeing as relational and developmental, shaped by the wider ecological systems in which children grow. It recognises the reciprocal influence between mental health, emotional functioning, and educational engagement.

1.2 School-based SEL interventions and the role of yoga and mindfulness

Building on these conceptual foundations, this section introduces school-based SEL interventions, with a focus on mindfulness and yoga. While these approaches show promise for supporting children's regulation and wellbeing, outcomes vary depending on how they are designed, delivered, and adapted to context.

While there is a growing interest in mindfulness and yoga-based approaches within schools, not all interventions produce positive outcomes (Evans et al. 2015b). A recent scoping review by Guzman-Holst et al. (2024) identified several potential harms associated with some school-based mental health programmes using mindfulness and cognitive behavioural therapy (CBT) techniques. These included increases in internalising symptoms (such as depression and anxiety), reductions in wellbeing, and declines in prosocial behaviour. Some negative outcomes appeared more frequently among certain subgroups, including high risk individuals, males, younger children, and those from socioeconomically disadvantaged backgrounds. Although such harms were reported in a minority of interventions (8.93%), they raise important considerations for intervention design, delivery, and monitoring. In particular, there is a need for caution where heightened emotional or cognitive awareness may inadvertently increase stress among vulnerable participants (Kuyken et al. 2022).

However, this remains a contested and evolving area. A recent meta-analysis by Hayes et al. (2025), drawing on 71 studies with over 63,000 participants, found small but statistically significant improvements in anxiety and depression symptoms following school-based interventions. No significant effects were reported for broader internalising outcomes. CBT based interventions were more effective than those based on mindfulness for anxiety, though differences for depression outcomes were less pronounced. Importantly, Hayes et al. (2025) did not report any evidence of harm, suggesting that such interventions, when

carefully designed and theoretically grounded, may offer modest benefits at scale. These findings contrast with those of (Guzman-Holst et al. 2024), and highlight the need for ongoing critical appraisal of both the benefits and potential risks of mental health interventions in schools. Taken together, these reviews suggest that universal approaches can play a constructive role in population level mental health strategies, but must be implemented with attention to contextual fit, theoretical coherence, and fidelity of delivery.

A growing body of educational research suggests that school-based yoga may offer valuable support for children's social and emotional wellbeing. Reported benefits include improved self-regulation, reduced stress, and enhanced attention, skills closely aligned with the goals of SEL (Serwacki and Cook-Cottone 2012b). However, findings remain mixed, and the evidence base is still developing. Several early studies and reviews have reported methodological limitations, such as small sample sizes, inconsistent delivery models, and limited long-term follow-up (Ferreira-Vorkapic et al. 2015; Khalsa and Butzer 2016). These limitations are explored in greater detail in Chapter 2.

Within this thesis, the term 'potential' is used to reflect emerging interest in yoga's educational applications, while recognising limitations in the evidence base. This study does not aim to determine whether yoga works. Rather, it focuses on how yoga is currently being implemented in NI primary schools and explores the contextual factors that shape its adoption, adaptation, and perceived value. By investigating existing practice, the study aims to generate insights that may inform scalable and context-sensitive approaches to supporting pupils' social and emotional wellbeing. While yoga may offer children practical tools for emotional regulation, focus, and self-awareness, further research, particularly in NI primary schools, is needed to determine if, how, when, and for whom it is most effective.

Conceptual overlap and confusion sometimes surround the terms yoga and mindfulness, particularly in educational contexts. Although distinct, mindfulness typically refers to present moment, non-judgemental awareness (Kabat-Zinn 2003), whereas yoga encompasses physical postures, breath control, and meditative focus (de Manincor et al. 2015). Despite these differences, the terms are often used interchangeably in both academic and applied settings. Throughout this thesis, the terms are used carefully; mindful yoga refers to integrated practices combining structured movement, focused breathing, and

mindful attention, while yoga and mindfulness are distinguished where appropriate. A fuller discussion of these definitions and their relevance to SEL is provided in Chapter 2 (Section 2.5.1). This raises important questions about how such practices align with educational structures and cultural dynamics present in NI.

1.3 Rationale for the study

Northern Ireland presents a unique socio-political landscape that shapes both education and child development. The school system is divided into several types based on religious and community affiliations: Controlled, Maintained, Integrated, and Irish-Medium schools. Academic selection through the transfer test at age 11 can contribute to stress and pressure among primary school children, raising concerns about emotional wellbeing (Pivotal 2022; Purdy et al. 2024). With mental health challenges increasingly affecting younger age groups, there is a growing need for school-based interventions that help pupils manage stress, build resilience, and regulate emotions (Marmot et al. 2020b; Piao et al. 2022).

This study explores the feasibility of integrating yoga into the NI primary curriculum as a means of supporting social and emotional wellbeing. Yoga-based interventions have shown potential to support self-regulation, attention, and emotional balance, key SEL competencies (Khalsa and Butzer 2016). However, empirical research on yoga in NI schools remains limited. This study aims to assess current practices, stakeholder perceptions, and barriers to implementation.

1.4 Researcher positioning and theoretical framing

Informed by this rationale, the study adopts a qualitative case study approach to explore the feasibility and perceived value of yoga within NI primary schools. Rather than proposing a new model, it draws insights from existing practice to understand how yoga may or may not be applied across varied school contexts.

The research is shaped by the author's background as a long-standing yoga practitioner and educator with extensive experience in educational and wellbeing settings. While this perspective offers experiential insight, deliberate strategies were employed to ensure

reflexivity and maintain analytical rigour (Braun and Clarke 2023). These included ongoing reflection, engagement with contrasting viewpoints, and attention to the risks of 'fighting familiarity' (Delamont et al. 2010); supported throughout by the critical input of academic supervisors. This reflexive stance is complemented by theoretical orientation rooted in Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner 1979,1994), which explains how wellbeing is shaped by interactions across personal, relational, and structural systems. This framework enriches the study while supporting a critically reflective research process.

1.5 Research Context: The NI Primary Curriculum

The NI primary school system provides education for children aged 4 to 11 across seven year groups (P1-P7). School types reflect the region's cultural and religious diversity. Controlled schools, managed by the Education Authority (EA), are open to all but traditionally serve Protestant communities (DENI 2023a). Maintained schools, serving the Catholic population, are managed by the Council for Catholic Maintained Schools (CCMS) and funded through the EA (CCMS 2023). Integrated schools, aimed at bridging the Catholic-Protestant divide have grown significantly since 1987 (DENI 2023b). Irish-medium schools deliver instruction primarily in Irish (Comhairle na Gaelscolaíochta 2023), while independent (voluntary grammar) schools operate outside public funding framework and are supported by the Governing Bodies Association NI (GBANI 2023).

The NI Curriculum, mandatory in all grant-aided schools, mirrors other UK curricula but includes unique regional elements. Alongside core subjects (literacy, numeracy, science, humanities, PE, the arts), it emphasises Personal Development and Mutual Understanding (PDMU), and cultural respect (Northern Ireland Council for the Curriculum and Assessment 2007).

A key difference in NI is the process of academic selection towards the end of P7. Though the 11+ exam was abolished in 2008, grammar schools continue to use private transfer tests, AQE, (mainly Protestant), and PPTC (mainly Catholic) (Hughes and Loader 2024). The

Dickson Plan¹ offers a later selection point at age 14. This process remains controversial, proponents argue it offers access based on merit; critics highlight its emotional toll (Morris and Perry 2017). Although concerns about the emotional impact of the transfer test have been documented for over two decades (Purdy et al. 2024), it is important to recognise that the system is long established and, as such, is unlikely to be a primary driver for the recent rise in children's mental health difficulties. Indeed, the drivers of mental ill health among young people are complex and multifactorial, extending well beyond the school environment (Marmot et al. 2020a).

Macro level factors such as economic inequality, austerity, and more recently, the COVID-19 pandemic, have all significantly contributed to rising levels of psychological distress among children and adolescents (Marmot et al. 2020b; Geweniger et al. 2022). Although this study was initially planned prior to the pandemic, data collection was conducted during a period of significant disruption. Schools were emerging from extended lockdowns and adjusting to new routines, including managing altered timetables, fluctuating attendance, and increased emotional and behavioural challenges among pupils. These circumstances not only influenced access, participation, and staff capacity, within schools but also highlighted the increasing relevance of school-based approaches to supporting emotional resilience and recovery (Casey and McLaughlin 2022). Consequently, SEL and wellbeing focused interventions gained renewed salience, as schools sought to address the social and emotional needs of pupils amid ongoing trauma and institutional strain (Ibarra 2022).

1.6 Research aims and questions

This study examines the current and potential future use of yoga in NI primary schools to support social and emotional wellbeing. It explores how yoga may be feasibly and appropriately integrated into school contexts.

¹ A Two-Tier System (also known as the Dickson Plan) operates in the Craigavon area where pupils transfer at the end of Key Stage 3 / Year 10. Further details can be found at: <https://www.eani.org.uk/parents/admissions/admission-to-senior-high-schools-age-14>

Research questions:

1. How is yoga currently being used in primary schools in NI?
2. What are the perspectives of key stakeholders, including principals, teachers, pupils, and parents, on the current and potential future use of yoga in Primary schools?
3. Can yoga be effectively integrated within the curriculum in schools in NI?
4. What would a testable model (and theory of change) for the implementation of a yoga intervention in NI schools look like?

1.7 Structure of the thesis

This thesis is structured as follows:

- Chapter 1 introduces the study by outlining the increasing recognition of social and emotional wellbeing (SEW) as a priority in primary education. It presents the potential role of yoga-based interventions in supporting SEW, situates the study within the unique socio-political and educational context of NI. It sets out the study's rationale, research aims, objectives, and key questions, and provides an overview of the structure of the thesis.
- Chapter 2 reviews relevant literature and theoretical frameworks relating to children's mental health, SEL, and the use of yoga-based interventions in educational settings. It critically evaluates the evidence base, identifies key gaps, and builds the case for the present study.
- Chapter 3 outlines the methodological approach, including the study's philosophical positioning, and rationale for using a sequential mixed methods strategy. It describes the data collection procedures for both phases and explains the analytical techniques used, including Reflexive Thematic Analysis and descriptive statistics.
- Chapter 4 presents the results of the Phase One scoping questionnaire, offering a descriptive overview of current yoga provision in NI primary

schools. It highlights key patterns in uptake, delivery models, and perceived benefits, as well as challenges reported by participating schools. These findings directly informed the design and focus of the subsequent Phase Two case study.

- Chapter 5 reports the findings from the Phase Two case study, based on interviews with key stakeholders including principals, teachers, yoga teachers, and pupils. It presents five overarching themes that reflect the feasibility, perceived value, and contextual challenges of integrating yoga in NI primary schools.
- Chapter 6 discusses the study's findings in relation to existing research, using Bronfenbrenner's Ecological Systems Theory (EST) to interpret the multi-level influences on implementation. It considers the implications for understanding yoga as a complex intervention and outlines a context-specific theory of change.
- Chapter 7 concludes the thesis by summarising the main contributions, reflecting on the study's limitations, and offering practical recommendations for policy and practice. It also identifies areas for future research and includes a reflexive analysis of the doctoral journey.

By addressing these aspects, this study aims to contribute to a growing body of literature on SEL and school-based interventions in NI, offering evidence-based insights into how yoga can be integrated effectively into primary education.

Chapter 2: Literature Review

2.1 Introduction

This chapter provides a comprehensive examination of existing research on social and emotional wellbeing (SEW), Social and Emotional Learning (SEL), and the role of yoga in educational settings. It explores the theoretical foundations that inform social and emotional wellbeing, considering psychological, educational, and physiological perspectives. It also assesses the empirical evidence on school-based interventions, with particular focus on yoga as a method for enhancing social and emotional wellbeing and supporting SEL development in primary school children.

The chapter is structured into key thematic areas, including an overview of the socio-ecological perspective of mental health, evidence of the impact of SEL on academic and emotional development, and research on the application of yoga in educational settings. It critically evaluates challenges of implementing SEL and yoga-based programmes, including cultural adaptation, policy considerations, and instructor training. Finally, the chapter highlights existing research gaps and areas for further study, providing a foundation for the empirical investigation reported in subsequent chapters.

2.1.1 Literature search strategy

The search strategy was designed to support a critical, context-sensitive review rather than a comprehensive systematic review, aligning with the applied and exploratory aims of the study.

The literature reviewed in this chapter was identified through a structured search strategy designed to capture peer-reviewed evidence relating to children's social and emotional learning (SEL), school-based wellbeing interventions, and yoga or mindful movement in educational settings. Searches were conducted between January 2021 and June 2024, with iterative updates in early 2025 to incorporate new systematic reviews and NI policy developments. To balance historical grounding with contemporary relevance, the search was time-bounded from 1970 onwards. This reflects the inclusion of foundational socioecological and developmental theories that influenced later SEL frameworks (e.g. Bernstein 1970), alongside the emergence of ecological models of child development and wellbeing (e.g. Bronfenbrenner 1974, 1979). It also captures the subsequent formalisation of SEL as a distinct field from the 1990s onwards, and the rapid expansion of school-based

mindfulness and yoga research from the early 2000s (Khalsa and Butzer 2016; Butzer and LoRusso 2021). Earlier foundational texts (e.g., Patanjali’s Yoga Sutras, as presented in Desikachar 1995) were included selectively where required to contextualise contemporary interpretations of yoga, although these were treated as philosophical rather than empirical sources.

Searches were undertaken across multiple academic databases, including Scopus, Web of Science, PubMed, PsycINFO, ERIC, and Google Scholar, ensuring coverage of education, psychology, public health, and complementary medicine research. Search terms were organised into four thematic clusters, SEL and child wellbeing, yoga and mindful movement, educational implementation factors, and Northern Ireland specific contextual terms. Boolean operators (AND/OR) and truncations were used to refine searches within and across categories (Table 2.1).

Table 2:1: Thematic search categories and search terms

Search Category	Associated Search Terms
1. SEL and Child Wellbeing	“social and emotional learning” OR SEL; “self-regulation” AND children; “emotional regulation” AND primary school; “executive functioning” AND children; wellbeing AND primary school
2. Yoga, Mindfulness, and Embodied Practices	“yoga” AND school; “school-based yoga”; “mindful movement”; “mindfulness” AND children; “embodied learning”; “breathwork” AND children
3. Educational and Implementation Factors	“school-based intervention”; “curriculum integration”; “teacher perspectives”; “mechanisms of change”; “trauma-sensitive” OR “trauma-informed”; “cultural adaptation”
4. Northern Ireland and Policy Context	“Northern Ireland” AND wellbeing; “Northern Ireland” AND education policy; “faith-based concerns” OR “religious sensitivity”; “implementation” AND schools

To ensure transparency and methodological rigour, clear inclusion and exclusion criteria were applied when screening the literature, these criteria are summarised in Table 2.2.

Table 2:2: Inclusion and exclusion criteria for literature search

Category	Inclusion Criteria	Exclusion Criteria
Population	Children aged 3–12, or studies including teachers/parents related to children’s SEL or yoga. Adult studies only when mechanisms were directly relevant to child development (e.g., breathwork physiology)	Studies focused exclusively on adults with no relevance to child development
Topic Focus	SEL, self-regulation, emotional development, wellbeing. Yoga, mindful movement, mindfulness in schools. Implementation, cultural adaptation, mechanisms of change	Clinical yoga/therapy interventions not situated in educational settings. Practitioner guides lacking an evidence base (except classical yoga texts used conceptually)
Type of Evidence	Empirical studies. Systematic / scoping reviews. Meta-analyses	Studies with insufficient methodological reporting. Speculative, non-evidential practitioner material
Publication Type	Peer-reviewed journal articles	Non-peer-reviewed sources unless NI/UK grey literature relevant to policy framing
Language	English-language publications	Non-English language publications
Grey Literature	Selected NI/UK policy documents (DE, PHA, CCEA), WHO, CASEL where relevant and robust	Grey literature lacking transparency, rigour, or relevance to NI context

Given the applied focus of the thesis, grey literature was selectively included, particularly policy documents from the Department of Education (NI), Public Health Agency (NI), the Council for Curriculum, Examinations and Assessment (CCEA), the World Health Organisation (WHO), and influential bodies such as the Collaborative for Academic, Social, and Emotional Learning (CASEL). Grey literature was excluded when it lacked transparency, robustness, or relevance to the NI educational context.

The geographical spread of the literature reflects the distribution of existing research. The majority of the empirical yoga studies were conducted in the USA and India, consistent with previous reviews (Khalsa and Butzer 2016; Martin et al. 2024). Research on SEL was predominately from the USA, UK, and Europe, while policy-relevant material centred on NI and broader UK frameworks. A smaller number of culturally focused studies from Japan and Australia informed discussions of cultural adaptation. This geographical distribution

highlights significant gaps in UK and NI-specific evidence, emphasising the need for context-sensitive research such as the present study.

Reflecting on the search process, it became clear that the specificity and framing of search terms strongly shaped the relevance of the literature retrieved. Within the SEL literature, terms such as *“social and emotional learning”*, *“self-regulation”*, and *“emotional regulation”* proved consistently effective when combined with *“children”* or *“primary school”*. Whereas broader wellbeing terms initially generated a high volume of adult or clinically oriented studies and required iterative refinement. Similarly, in the yoga and mindfulness literature, the use of context-specific terms such as *“school-based yoga”* and *“mindful movement”* was more productive than generic searches for *“yoga”* or *“mindfulness”*, which frequently returned studies situated outside educational settings. Implementation focused terms, including *“teacher perspectives”*, *“curriculum integration”*, and *“cultural adaptation”*, were particularly valuable in foregrounding feasibility and contextual issues central to this study. Overall, this iterative refinement of search terms reinforced the importance of contextual specificity when engaging with an interdisciplinary evidence base, and helped to shape a literature review that was both focused and aligned with the aims of the research.

2.2 Mental health and social and emotional wellbeing: A social-ecological perspective

Mental health and social and emotional wellbeing are shaped by a complex interplay of individual, social, and environmental factors (Hogg and Moody 2023). Understanding these influences requires moving beyond individual level explanations, to consider the broader social and ecological contexts in which children develop (National Institute for Clinical Excellence 2022; World Health Organisation 2023). Ecological Systems Theory (EST), originally proposed by Bronfenbrenner (1979); (Bronfenbrenner 2005), provides a valuable lens for examining how multiple systems, ranging from immediate family interactions to broader social structures, affect children’s emotional development and wellbeing.

While Bronfenbrenner later refined the model as bioecological theory, to emphasise proximal processes and individual characteristics (Bronfenbrenner and Morris 2006), this thesis initially applies the original systems-based model to examine the contextual conditions shaping yoga implementation in NI primary schools. Elements of the

bioecological model are introduced later where relevant to discussions of child-environment interactions. By using this framework, the study identifies key influences across the microsystem to macrosystem that inform the implementation and adaptation of wellbeing practices in school settings.

The principles of Bronfenbrenner's EST emphasise the significance of social interactions between children and their environments, highlighting the importance of social processes in shaping development. Although the theory originated in developmental psychology, EST has since been adapted for educational research, providing practical guidance for creating supportive learning environments (Tong and An 2024). Bronfenbrenner (1979) identified the need to recognise the varied and complex influences affecting an individual within their social and environmental context. This foundational perspective is echoed in more recent work by McClure et al. (2017, p. 12) who assert that:

Children grow and learn in a complex, intertwined web of relationships, experiences, and environments, yet our research frameworks, educational policies, and assumptions about what young children need do not always reflect this simple truth.

Bronfenbrenner emphasised that families, communities, cultures and societal structures are key determinants of child development (Hayes et al. 2017). Importantly, he advocated for his bioecological model to be evaluated with real world data to test its predictive validity and key principles (Bronfenbrenner and Morris 2006). A co-founder of the Head Start programme, established in 1965 to support children the wellbeing of children from low-income families and their communities, Bronfenbrenner (2005) argued that the programme's main purpose was not to provide remedial education. Rather, its primary aim was to instil a sense of dignity, purpose, and meaningful engagement among children and their families, irrespective of social backgrounds. Central to Bronfenbrenner's work was the recognition that individual wellbeing is inextricably linked the broader social and structural contexts in which development occurs (Bronfenbrenner 2005). He therefore contended that supporting healthy family functioning requires systemic change, addressing not only individual needs, but also the wider environments that shape development. This included addressing key societal institutions, such as healthcare, education, housing and

employment, which significantly influence children's developmental trajectories (Bronfenbrenner 1974). His work laid the foundation for a social ecological approach that integrates individual experience with structural determinants, providing a framework highly relevant to contemporary efforts to promote children's social and emotional wellbeing.

EST emphasises the intricate interactions across multiple layers of context, all of which play distinct roles in shaping a child's development, with the child positioned at the core (Egan and Pope 2022). At the heart of the theory is the microsystem, defined as; "*interpersonal relations experienced by the developing child in a given face-to-face setting*" (Bronfenbrenner 1994, p. 1645). This encompasses the child's close relationships and direct interactions with family, caregivers, teachers, and peers. From an educational perspective, teachers and classroom assistants can impact a child's social and emotional wellbeing through their continual interactions, which in turn can foster positive development outcomes (Quill and Kahu 2022).

These exchanges, known as proximal processes, occur within the microsystem where developments happen and unfold over time. Often described as the interplay between nature and nurture, proximal processes are considered the primary drivers of human development. They correspond to the first 'P', Process, in Bronfenbrenner's evolving Process, Person, Context, and Time (PPCT) model (Bronfenbrenner 1994,2005). The impact of proximal processes depends not only on the characteristics of the process itself, but also on the second 'P', Person, which refers to the individual's biological and psychological attributes, as well as the environmental context 'C', and the periods of time 'T' in which development occurs (Hayes et al. 2017).

While the microsystem captures the immediate environments in which proximal processes occur, development is also influenced by the interconnections between these settings. The mesosystem consists of connections between the various microsystems, such as the relationships between home and school environments. For instance, a child's academic performance can be influenced by the quality of communication and collaboration between their parents and teachers (Grolnick and Slowiaczek 1994). When these key adults work together to support the child's learning, by sharing concerns, reinforcing expectations, or celebrating progress, it creates a consistent and supportive developmental environment.

This coherence strengthens the child's sense of security and engagement in school, leading to better learning outcomes and greater emotional stability (Hayes et al. 2017; Hayes et al. 2025).

Beyond the immediate and interconnected environments, children are also affected by systems in which they do not actively participate. The exosystem encompasses interactions between microsystems where the child is not directly involved but is still affected indirectly by what occurs within them. Bronfenbrenner (1994) identified three key exosystems that might influence child development: 1) the parent's workplace, 2) family social networks, and 3) neighbourhood or community contexts. For example, if a parent experiences stress at work due to long job hours or job insecurity, this can impact their mood and availability at home, reducing the emotional support available to the child and thereby affecting their wellbeing and academic progress (Repetti et al. 2002).

The relationship between the various systems within EST is fluid, as the daily interactions and activities in which a child participates play a vital role in achieving the objectives of early childhood education (Navarro et al. 2020). Developing positive relationships between teachers and children (microsystem) and between teachers and parents (mesosystem) is essential for enhancing proximal processes. It is therefore crucial to nurture and strengthen these connections in early childhood environments (Hayes et al. 2017).

Ecological systems theory recognises that these relationships are situated within, and influenced by, multiple levels of context. This perspective is captured in Bronfenbrenner's (1979, p. 21) definition of the ecology of human development as:

The scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which, the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded.

One such broader context is the macrosystem, which comprises external environments that indirectly affect the child. These include societal structures such as cultural values and beliefs, economic conditions, social norms, and political policies. Unlike the more immediate

systems, the macrosystem does not involve direct interactions but instead consists of overarching frameworks that shape the environments in which individuals live (Bronfenbrenner and Morris 2006).

As contemporary early childhood education becomes increasingly shaped by global, political, and economic forces, attention to macrosystem influences is key to understanding how broader structural factors impact children's developmental pathways (Penn 2011; Borisova et al. 2019). As an example, academic selection was introduced through the NI Education Act in 1947 to offer greater educational opportunities to children from a disadvantaged background; however, it is identified by some as both an undue source of stress and a barrier to social cohesion (McMurray 2020; Hughes and Loader 2024) This illustrates how government policies can have profound, long-term effects on mental health and educational experiences.

However, to fully understand development, it is also necessary to consider the dimension of time, how individual lives and societal structures evolve across historical periods. The chronosystem encompasses all layers within EST. It takes into account both the timing of life events and transitions, such as starting school or transitioning from primary to secondary school, and the broader sociohistorical conditions, that shape an individual's development. An example of such a sociohistorical condition is the COVID-19 pandemic, which Benner and Mistry (2020, p. 238) describe as a sociohistorical event capable of creating,

“Developmental turning points, setting into motion accumulating advantages or disadvantages that can deflect long-term trajectories of wellbeing.”

Bronfenbrenner (1994) refers to Elder's *Children of the Great Depression* (Elder 1974) as an application of this, whereby the long-term effects of economic deprivation on families are examined. Families were categorised into two groups, those experiencing income losses exceeding 35%, and those with smaller reductions. The longitudinal study allowed for the assessment of key developmental outcomes through childhood, adolescence, and adulthood. Critically, despite the adversity, adolescents from more economically strained middle-class families exhibited positive developmental outcomes, including increased ambition, clearer career goals, and greater life satisfaction. These outcomes were attributed to the adaptive responses required by the economic strain, which led to greater family

cohesion, and adolescents assuming greater responsibilities. In turn, this nurtured essential life skills such as initiative and cooperation, which contributed to their long-term wellbeing. Elder's findings illustrate how sociohistorical events, such as economic crises, can serve as pivotal developmental turning points. This echoes Benner and Mistry's (2020) assertion relating to the potential long-term effects of significant disruptions such as the COVID-19 pandemic.

EST provides a valuable framework for understanding the complex, multi-layered influences that shape children's mental health and social and emotional wellbeing. It emphasises how daily interactions, educational settings, and sociohistorical contexts contribute to developmental outcomes. Recent research continues to explore the long-term impacts of social and economic stressors, such as the COVID-19 pandemic, on children's wellbeing and resilience (Marmot et al. 2020b). Grounded in this theoretical foundation, EST provides a critical lens for designing evidence-based interventions aimed at promoting resilience, emotional regulation, and holistic wellbeing in children.

However, no single intervention can address the full breadth of systemic influences identified by EST. Interventions such as yoga in schools must be understood as operating within, and shaped by, the wider systems in which they are introduced (Hawe et al. 2009). As Hawe et al. (2004) argue, interventions should be conceptualised not as isolated inputs, but as events within complex systems, whose effects are influenced by contextual conditions as much as by the content of the intervention itself. Acknowledging this complexity is not a reason for inaction, but rather a call for more nuanced, adaptive approaches to implementation and evaluation (Moore et al. 2019). Hawkins et al. (2017) exemplify this through a three-stage framework that supports the prototyping of public health interventions prior to formal piloting, enabling adaptation of content and delivery methods to suit specific populations and settings. This conceptual framing is further explored in Section 6.2.1.5, where yoga is examined as a complex intervention situated within the dynamic realities of NI primary schools.

It is important to recognise that many of the issues affecting children's health and social and emotional wellbeing are rooted in structural socio-ecological conditions such as poverty, health inequality, and under resourced education systems (Purdy 2021; Mental Health

Foundation 2023). These factors operate at the exosystem, macrosystem, and chronosystem levels of Bronfenbrenner's model illustrating how policy decisions and broader social structures shape development outcomes (Bronfenbrenner and Morris 2006). For example, inadequate housing or unstable employment may directly impair a child's emotional wellbeing by increasing family stress or reducing parental availability (Jakab 2011; Marmot et al. 2020a).

These principles are reflected in the Children's Services Co-operation Act (NI) 2015, which identifies eight domains of wellbeing, including; health, education, safety, and economic security, affirming a holistic vision of child development (Northern Ireland Executive 2016). However, as scholars such as Moore et al. (2020a) and Keyes (2006) caution; frameworks like this may risk conflating the structural determinants of wellbeing (e.g., income, access to education) with wellbeing itself as a lived experience or developmental outcome. Nevertheless, the interdependence between these domains is important. Improvements in one area, such as safety, can reinforce gains in others, such as educational attainment or emotional regulation. For example, a child nurtured in a safe and stable environment is more likely to experience better health, greater happiness, and improved readiness to learn (Purdy 2021). Conversely, a negative outcome in one domain can have cascading negative effects. Children experiencing poor economic wellbeing through living in poverty are more likely to have poor health and lower levels of educational attainment (Northern Ireland Executive 2016).

These insights reaffirm the need for contextually responsive interventions that account for the broader social determinants of health (Brown et al. 2025). Social inequality, in particular, tends to influence children's development across multiple ecological levels (Marmot et al. 2020a). The following section explores these influences in greater depth, beginning with an examination of socioeconomic inequality and its relationship to early mental health and wellbeing.

2.3 Early mental health and wellbeing: Foundations for lifelong outcomes

Mental health and social and emotional wellbeing in childhood are fundamental to shaping long-term educational, social, and health outcomes. As outlined in Chapter 1, this thesis

distinguishes between mental health as a broad condition related to functioning and coping; and social and emotional wellbeing as a more specific set of outcomes tied to children's emotional regulation, interpersonal skills, and relational capacities. While closely linked, social and emotional wellbeing and mental health are not synonymous; rather, they interact dynamically and are shaped by both individual and contextual factors (Moore et al. 2020b).

Good mental health in early life is associated with improved educational attainment, higher earning potential, stronger social relationships, and better physical health across the lifespan (Shute and Slee 2016; Panayiotou et al. 2019; Durlak et al. 2022). Conversely, poor mental health and wellbeing in childhood can increase the risk of a range of adverse outcomes, including emotional disorders, social withdrawal, and long-term physical health problems (Department of Health and Public Safety 2014; Northern Ireland Executive 2016; Department of Health NI 2021).

Concerns about these outcomes have intensified in recent years. The onset of COVID-19 heightened public awareness of mental health concerns, though the prevalence of mental health disorders among children had been on an upward trajectory for over two decades (Gunnell et al. 2018; Piao et al. 2022). For example, the 2012 European Union Youth Report estimated that approximately 20% of young people experienced mental health issues with between 10% to 20% affected by conditions such as anxiety and depression, with an additional 20% exhibiting emotional or behavioural problems (Hagen and Nayar 2014). These data point to an already emerging crisis in children's mental health well before the pandemic.

Within the UK, these trends were particularly pronounced. Even prior to the pandemic, UNICEF reported that children and adolescents in the UK had the lowest levels of mental health and wellbeing among twenty-one industrialised nations (Lloyd et al. 2023). In a 2019 survey Moore et al. (2022) found that approximately one in six pupils were already reporting emotional difficulties, a figure that escalated to over one in four by 2021. This pattern illustrates how the pandemic has further compounded pre-existing vulnerabilities among UK youth (Goodfellow et al. 2024).

In NI, the burden of mental ill health is especially acute. Mental and emotional disorders were already among the leading causes of disability and ill health, with one in five adults

and 1 in 8 children (12.5%) affected, the highest prevalence rates across all UK regions (Betts and Thompson 2017; Cassidy 2024). Post-pandemic, the prevalence of mental health disorders in NI is approximately 25% higher than in other regions of the UK and internationally, highlighting significant regional health disparities (Bunting et al. 2022; Cassidy 2024). These findings highlight the cumulative impact of stressors which are often shaped by socio-political, and economic contexts, for example, ongoing structural inequality, underinvestment in services, and historical trauma contribute to poorer outcomes in NI (Purdy 2021).

These broader influences highlight the need to view mental health and social and emotional wellbeing not only through an individual lens, but also via a socioecological framework that accounts for the complex environments in which children grow and learn (Marmot et al. 2020a; Marmot et al. 2020b; World Health Organisation 2023). Mental health and social and emotional wellbeing are inextricably linked with other noncommunicable diseases, including obesity, depression, hypertension, high cholesterol, Type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnoea and breathing problems and some cancers (CDC 2012; Swinburn et al. 2013). These associations further emphasise the importance of early intervention and prevention.

To help address these growing concerns, the (World Health Organisation 2004) stresses the importance of targeting risk and protective factors from birth through childhood. (Dorris et al. 2019) support this view, citing evidence that actively promoting positive emotional wellbeing in early life not only improves immediate quality of life but also reduces the prospect of mental ill-health in adulthood. Children who develop strong mental health foundations in their early years are better equipped to cope with the social and emotional challenges they may encounter throughout life (Hogg and Moody 2023). Conversely, the absence of such a foundation can increase vulnerability to long-term mental and physical health conditions, including anxiety disorders, mood disorders, and impulse control disorders (Department of Health and Public Safety 2014; Department of Health NI 2021).

2.3.1 Socioeconomic inequality as a determinant of social and emotional wellbeing

From a socioecological perspective, children's mental health and emotional wellbeing are shaped by interactions across multiple systemic levels, rather than emerging in isolation (Zhang et al. 2017). Bronfenbrenner's EST (2006) helps situate these influences within societal structures, economic policies, social inequalities, and community infrastructure, that function as risk or protective factors across different ecological levels (Bronfenbrenner and Morris 2006; Zhang et al. 2017). Social determinants of health emerge most prominently at the exosystem and macrosystem levels, where disparities in income, housing, and education directly influence children's lived experiences (Bambra 2011; Edwards et al. 2024). Socioeconomic status (SES) influences children's lives through multiple interrelated domains, including family income, employment, neighbourhood quality, school resources and access to health and social services (Wadsworth and Santiago 2008; Marmot et al. 2010). These influences are shaped by broader political and economic systems that structure opportunity and constrain access (Marmot et al. 2020a). The COVID-19 pandemic intensified these existing disparities, disproportionately affecting families in low-income communities (Busse et al. 2022; Geweniger et al. 2022).

Northern Ireland presents a particularly acute context for examining these dynamics. The region has one of the highest levels of socioeconomic deprivation in Western Europe, compounded by the legacy of conflict and persistent inequalities in housing, education, and employment (Gallagher 2004). Research in NI has consistently demonstrated the relationship between SES and adverse mental health outcomes. For example Schubotz and McMullan (2010) reported that 29% of 16-year-olds exhibited symptoms of emotional or mental health problems, rising to 43% among those from lower socioeconomic backgrounds. Similarly, the Mental Health Foundation (2016) reported that 30% of individuals in NI's most deprived areas, showed signs of mental ill-health, double that of more affluent areas (Department of Health and Public Safety 2014; Mental Health Foundation 2016). The most recent wellbeing data indicate a further decline in outcomes for 11-year-olds in NI, with 2022/23 marking the lowest levels recorded to date (Mental Health Foundation 2023).

These findings reflect a well-established body of evidence linking socioeconomic inequality with poor health outcomes. Seminal public health documents, including *The Black Report*

(Black 1982), *The Ottawa Charter* (World Health Organisation 1986), *Health of the Nation* (1992), *The Solid Facts* (Wilkinson et al. 1998), *The Marmot Review* (Marmot et al. 2010), and *The Marmot Review 10 Years On* (Marmot et al. 2020a), have consistently demonstrated the inverse relationship between SES and health. Consequently there are significant differences in mortality between low-and high-income countries. (Brenner 2005, p. 1215). However, while national wealth (GDP) can be associated with improvements in population health, it may obscure inequalities within countries (Smith et al. 2016). For example, both the UK and USA rank among the wealthiest nations globally, yet income distribution remains highly unequal. Approximately 75 – 80 % of income is concentrated in the more affluent half of society, with the poorest receiving only 20-25% (Wilkinson and Pickett 2010).

These longstanding disparities were further exposed and exasperated by the COVID-19 pandemic. Life expectancy in England’s most deprived areas declined between 2010-2012 and 2016-18, with people in these communities now spending more years in poor health (Marmot et al. 2020b). The Institute for Public Policy Research (2020) estimated that the economic fallout from the pandemic pushed an additional 1.1 million people in the UK into poverty, including 200,000 children. Simultaneously, school closures disrupted the education of over 80% of children worldwide, disproportionately affecting pupils in low-income households and contributing to long-term disparities in learning, health, and wellbeing (Van Lancker and Parolin 2020). Referring specifically to the inequalities exposed by the Covid-19 pandemic Koulla Yiasouma, the NI Commissioner for Children and Young People observes:

We are not all in the same boat. We are all in the same storm. Some are on super yachts. Some have just one oar. Furthermore, the pandemic has, “laid bare the deep inequalities in our society particularly with regard to poverty and disability”
NICCY (NICCY 2021, p. 4).

These contextual factors have direct implications for the implementation of school-based wellbeing interventions such as yoga. While such programmes are often positioned as universally beneficial, growing evidence suggests that, without careful design, they can unintentionally reinforce or widen existing inequalities. Moore et al. (2015a), in a systematic

review of school-based health interventions, found that programmes relying solely on educational content were more likely to exacerbate socioeconomic disparities, whereas those incorporating structural or environmental changes had greater potential to reduce them. Similarly, Haataja et al. (2025) highlighted that while many wellbeing interventions collected data on pupils' social background, few analysed or reported differential outcomes. As a result, potential inequalities in how interventions were experienced or their effectiveness across different groups, such as pupils from low-income families or ethnic minorities, were often left examined.

These findings reinforce the importance of designing and evaluating school-based interventions with equity in mind; ensuring that practices such as yoga are not only evidence based but also responsive to the lived realities of children in disadvantaged communities.

2.3.2 Policy implications of socioeconomic influences on wellbeing.

Mental and physical health can be enhanced by effective public health policies, but they can also be adversely affected by non-health policies, such as those relating to housing, childcare, welfare, and education (Joseph Rowntree Foundation 2022). However, when designed through an integrated and equity focused lens, such policies also offer the potential to reduce disparities and promote wellbeing, an approach often referred to as *Health in All Policies* (World Health Organisation 2014). Therefore, there should be a focus on ensuring the effectiveness and coherence of government interventions across both health and non-health sectors (World Health Organisation 2004). This is further supported by (Jakab 2011, p. 14) who argues that tackling the determinants of health and wellbeing requires strong, coordinated government action to “*avoid fragmented, ad hoc actions*”. A clear example of how poorly aligned welfare policy can impact child wellbeing is the two-child cap on UK benefits, which has been widely criticised for disproportionately affecting low-income families, and exacerbating child poverty (Stewart 2023; Chzhen and Bradshaw 2025).

Van Lancker and Parolin (2020) suggest macro-level solutions to address inequalities, including the implementation of national policies that provide regular income support for

households with children to mitigate the economic impact of COVID-19 and prevent further increases in child poverty. Goodfellow et al. (2024, p. 11) concur, referring to the recommendations made by *Health Equity in England: The Marmot Review 10 Years On*, which include “*Maximising empowerment for all, improving standards of living, creating fair employment, and developing healthy communities.*” Consequently, these measures would reduce existing inequalities and lessen the unequal impact of epidemics. However, addressing root causes would require more comprehensive and inclusive policy actions across all levels of governance (Joseph Rowntree Foundation 2022).

The unique political landscape of NI, including periods of devolution and direct rule from Westminster, significantly shapes how such policies are developed and implemented. NI experienced a 30-year period of religious and political conflict known as ‘The Troubles’ (1968-1998) during which over 3600 people lost their lives. Over this period, NI was under direct rule from Westminster for 25 years, with governance managed by a Secretary of State for NI. This changed following extensive political negotiations, leading to the signing of the *Good Friday Agreement* in April 1998 (Northern Ireland Assembly 1998). As a result, the NI Assembly was established, consisting of 90 members of the Legislative Assembly (MLAs).

Following the May 2022 elections, a First Minister, Deputy First Minister and two Junior Ministers (who form the Executive Office) were elected who together with eight other MLAs then form the NI Executive. There are nine departments (including the Executive Office), each of the remaining eight MLAs is delegated responsibility of a department (NI Direct Government Services 2025). In NI, education and health policies are primarily addressed by the Department of Education (DENI), and the Department of Health (DoH NI) respectively. These departments are responsible for policy development, service funding, and achieving key public wellbeing goals. For example, Primary Schools in NI are primarily funded through public mechanisms overseen by the Education Authority for NI (EANI) and DENI. The EA is responsible for distributing resources to the schools, ensuring that public funds reach institutions across all sectors.

A significant aspect of this funding process is the Common Funding Scheme (CFS), which allocates financial resources based on several key factors. These factors include the number of enrolled pupils, socio-economic indicators (such as the proportion of students eligible for

free school meals), and the geographic status of the school. This formula-based approach was developed to ensure that schools serving disadvantaged communities or operating in remote areas receive financial assistance (Education Authority for Northern Ireland 2024). However, although the NI Executive has control over health and education, the main economic tools for redistributing or concentrating wealth remain under the control of the central Government at Westminster. As a result, the NI Executive faces the challenge of addressing inequalities and mitigating their impacts without the authority to address the root causes. This situation is exemplified by the planned 2.5% budget cut for DENI in the 2023/24 academic year, resulting in a funding shortfall of £382 million (Fitzpatrick et al. 2023).

Such structural underfunding compounds the risk that school-based interventions disproportionately benefit already advantaged pupils or schools. As Haataja et al. (2025) argue, without explicit attention to contextual inequalities and differential impacts, even well-meaning programmes may fail to deliver equitable outcomes. In the context of the budget cuts, this raises important concerns about who is most likely to access and benefit from interventions like yoga, particularly when resources for training, space, and delivery are unequally distributed (Purdy et al. 2022).

This broader context highlights the challenges faced by the NI Executive in balancing resource allocation within an underfunded system, while addressing the wider socio-economic factors impacting education and wellbeing. NICCY (2021) criticises the history of 'sticking plaster' solutions employed by successive governments in response to poverty and health inequality, noting their failure to address underlying causes while ignoring the detrimental effects of public funding cuts on children. Fitzpatrick et al. (2023) note that austerity measures and the rising cost of living are affecting parents' and carers' ability to provide essential items needed for education and for maintaining a reasonable level of physical and mental health and wellbeing. These essentials include food, school uniforms, digital devices, and participation in educational enrichment activities, such as sports, music, and drama, both in school settings and through external youth programmes.

Existing problems have been compounded by recent education cuts that are anticipated to disproportionately impact the most disadvantaged children and young people, potentially

hindering efforts to improve educational outcomes (National Education Union 2023). The evidence suggests that such financial reductions may exacerbate existing educational achievement gaps, increase poverty, and worsen mental health challenges among children and young people, many of whom are still dealing with post-pandemic effects (Fitzpatrick et al. 2023). Goodfellow et al. (2024) support these findings reiterating the recommendations from Marmot et al. (2020a) that emphasise empowerment, improved living standards, equitable employment, and the development of healthy communities. All proposed as crucial measures for reducing health inequalities and minimising the unequal impact of epidemics.

These widening mental health disparities have cascading effects on academic outcomes, with a significant gap in attainment levels becoming evident. However, from a NI context, Purdy et al. (2022) found that while there is a general link between socioeconomic class and student achievement, the impact can vary depending on the context and the support systems in place within individual schools. While it is widely recognised that the root causes of socioeconomic deprivation and educational underachievement lie at a structural level. Those schools that adopt a socioecological, or whole school approach, can better understand and address the multifaceted nature of educational underachievement (Edwards et al. 2024).

Consequently, those that effectively leverage both internal resources and those of the surrounding environment and community tend to achieve the greatest success (World Health Organisation 2023). The significant educational inequalities outlined in the context of socioeconomic imbalance accentuate the need for targeted interventions to address both academic and emotional wellbeing challenges faced by disadvantaged children (Prior et al. 2022). However, as Moore et al. (2015a) and Haataja et al. (2025) caution, unless these interventions are designed and evaluated with a clear equity lens they risk further entrenching the very inequalities they seek to address. A focus on context sensitive design, co-production, and inclusive delivery, particularly for marginalised groups, must therefore be central to any wellbeing strategy.

2.4 The role of schools and social and emotional learning

The socioeconomic and policy challenges outlined in the previous section illustrate the profound impact of structural inequalities on children's mental health and educational outcomes. While policy interventions and economic reforms play a fundamental role in addressing disparities, schools emerge as key settings where interventions can help to mitigate the effects of socioeconomic disadvantage (Herlitz et al. 2020). However, targeted approaches, while aiming to support those most in need, can risk reinforcing stigma and often involve setting eligibility thresholds that exclude children who are struggling but do not meet predefined criteria (Evans et al. 2015b). By contrast, universal interventions, particularly those incorporating structural or environmental change, may help reduce disparities, especially when their design attends to social context and differential need (Moore et al. 2015a; Haataja et al. 2025).

Building on this understanding, research suggests that educational institutions, when equipped with the right resources and support, can serve as protective environments that nurture social and emotional learning (SEL), resilience, and overall wellbeing (World Health Organisation 2023; Edwards et al. 2024). However, for schools to effectively support children's mental health, their role must extend beyond traditional academic instruction. They must encompass holistic, whole-school approaches that integrate social, cultural, and material dimensions of health promotion (Goldberg et al. 2019). This section explores the role of schools in SEL, examining evidence-based frameworks and interventions that seek to bridge the gap between education and mental health support, particularly for disadvantaged children.

These whole-school approaches align with the broader 'settings' approach to health promotion which embraces social, cultural and material perspectives and reflects EST's emphasis on the interplay between individual, organisational, and societal factors. These perspectives were highlighted by the 'Healthy Cities' project, initiated by the World Health Organisation (WHO, 1986), which implemented principles from Health for All (WHO, 1985) and the Ottawa Charter (World Health Organisation 1986). Ideal settings were identified to facilitate the promotion of health within pre-existing organised, and structured systems,

such as workplaces, schools, neighbourhoods, health care and hospitals (Naidoo and Wills 2000).

However, while schools represent an important setting for health promotion, their capacity to address deep-rooted structural inequalities remains limited. Bernstein (1970) argued that the school system both reflected and reinforced broader social inequalities, which were unevenly distributed across different social groups. He suggested that these disparities, formed in early childhood, became further entrenched throughout the school years and persisted into adulthood. Nevertheless, he emphasised that the responsibility for children's mental and physical health cannot rest solely with schools, as education alone cannot compensate for societal inequalities. Gorard (2010) concurs, noting that many factors influencing health are beyond the direct reach of education or schooling, such as changing family structures, multi-generational unemployment, and pre-existing mental health problems among young people.

Yet, schools are recognised as a setting where the social experiences of children can foster educational attainment, build trust and the inclination to help others, and cultivate a positive mind-set toward continued personal development (Gorard 2010). This view reflects a social ecological understanding, where schools are positioned as key mesosystems that connect children's immediate environments, influencing both individual development and wider social outcomes. Further support for this argument is provided by Ross (1980), who maintains that schools have long been perceived as natural settings for initiating and delivering mental health programs to large numbers of young children.

Additionally, Shute and Slee (2016) point out that having access to a captive audience of children also facilitates engagement with their primary caregivers, who play a critical role in the development of their physical and mental wellbeing. Given the central role of schools in children's lives, positive mental health and wellbeing are integral to effective learning, and in the UK context, children spend over 7,800 hours in school across their primary and post-primary education (Dorris et al. 2019). This substantial time investment positions schools as an ideal setting for nurturing not only academic development but also personal and social wellbeing. They are structured environments conducive to promoting healthy lifestyle

habits. Within these settings, foundational opportunities can be created for all children, regardless of socioeconomic status, culture, or community (Wright et al. 2020).

However, the assumption of universal school reach is flawed given rising absenteeism in NI. Approximately 30% of pupils are persistently absent (missing >10% of sessions), affecting nearly 100,000 children across primary, secondary, and special schools in 2023/24 (McCarron 2024; Department of Education Northern Ireland 2025). Disadvantaged students (FSME) fare worse, with 15.6% missing over 15% of half-day sessions, compared to 9.6% of non-FSME peers in 2021/22 (Knox 2025). This absenteeism disproportionately affects those in most need of support, undermining the assumption that schools can reach all children with wellbeing interventions.

In response to such challenges, the WHO's Health promoting Schools (HPS) framework exemplifies a socio ecological approach to health promotion within educational settings. This framework emphasises the integration of health into all aspects of school life, including the curriculum, the school's ethos, and engagement with families and communities (World Health Organisation 2021). Such a comprehensive approach positions the school as a central setting, supported by relationships with local officials, national governing bodies, parents, education officials, unions, community members, and multisectoral partnerships.

A systematic review of the HPS found it to be effective in some areas, but lacking in others, leading to a call for further research (Langford et al. 2014; Langford et al. 2015). A subsequent review found the HPS to be an effective means of improving several areas relating to student health, though there was a paucity of evidence in key areas such as mental health. Among their key recommendations for future HPS interventions was exploring the effectiveness at intervening at an earlier age (primary/elementary) to improve mental health (Langford et al. 2017). Overall, by recognising the interconnections between the individual, school, family, and community, the Health Promoting Schools framework operationalises a social ecological approach to health promotion (Langford et al. 2015). This illustrates how settings-based interventions can target multiple levels of influence to support children's social and emotional wellbeing. While discrete practices such as yoga may not in themselves constitute a settings-based intervention, they can potentially be embedded within a whole-school approach to contribute to broader wellbeing goals (Khalsa

and Butzer 2016). One such domain through which these goals are pursued is SEL, which equips children with the internal resources to manage emotions, relationships, and stressors within and beyond the school environment (Wigelsworth et al. 2022).

2.4.1 Social and Emotional Learning

Social and emotional skills serve as proactive factors for mental health, equipping children with the necessary tools and resources to navigate challenges that may disrupt life, learning, and wellbeing (Graetz et al. 2008). SEL lays a foundation for the development of essential competencies in all children, it supports both universal early intervention and more targeted approaches for those requiring additional assistance (McClelland et al. 2017).

Research highlights the importance of early school environments as a foundational contexts for developing children's social and emotional skills (Panayiotou et al. 2019). In NI, these are addressed in the primary curriculum through Personal Development and Mutual Understanding (PDMU), which aims to support children in becoming emotionally aware, socially effective, and responsible decision makers (Northern Ireland Council for the Curriculum and Assessment 2007). Panayiotou et al. (2019) indicate that SEL skills acquired by age nine can predict outcomes at Key Stage 2, largely through their influence on mental health during the intervening years. However, while PDMU promotes these skills, van Poortvliet et al. (2019) caution against positioning SEL as a substitute for broader systems of mental health support. Instead, SEL should be integrated within a holistic, multilevel approach to wellbeing.

This broader view is reflected in the Collaborative for Academic, Social and Emotional Learning (CASEL) definition of SEL as a developmental process through which individuals learn to regulate emotions, set goals, demonstrate empathy, maintain positive relationships, and make responsible decisions (Hamilton and Gross 2021). These competencies are essential for not only academic success but for lifelong wellbeing. Early research also supports the view that emotions are not solely innate but are shaped by experience and learning, highlighting the potential of structured SEL programmes to nurture emotional regulation, resilience, and adaptive coping strategies (Gesell and Bullis 1971).

Over the past two decades, the concept of SEL has evolved significantly, with organisations such as CASEL, playing a pivotal role in defining and advocating for its role in holistic child development (Swartz 2017). Allen (2011) stresses that equipping children with a strong foundation in social and emotional skills is essential to preparing them for success in education, family life, and broader social contexts. He refers to this as the formation of a ‘social and emotional bedrock’. Similarly, (Feinstein 2015) emphasises the ‘learning’ aspect of SEL, stressing that these abilities are not fixed traits but develop continually across home and school environments. These core competencies encompass cognitive, behavioural, and regulatory capacities that enable children to thrive in diverse settings (McKown 2017). Failure to cultivate these skills early in life has been linked to an increased risk of mental health challenges. In NI, approximately 20% of young people experience significant health difficulties during the transition to adulthood (DHSSPS 2015). However, evidence suggests that promoting resilience and coping strategies from an early age, particularly within the primary education setting, can mitigate the long-term effects of stress and adversity (Grant et al. 2006; Bazzano et al. 2018).

The effectiveness of SEL is further supported by large-scale research. A meta-analysis by (Durlak et al. 2011b), which examined 213 interventions involving 270,034 students from kindergarten through to high school, found that students who participated in SEL programmes demonstrated an 11-percentile point improvement in academic achievement compared to non-participants. Conversely, weak social and emotional development is linked to poor mental health and significant behavioural challenges (LeBuffe et al. 2018). Current research affirms that SEL competencies are both malleable and teachable, from early childhood through adolescence and into adulthood (Feinstein 2015; Hosokawa et al. 2024). For example, SEL has been widely embedded in the US education system, with fifty states integrating it at preschool level, and many extending provision across all school years (Swartz 2017). Hence, there is a need to focus on Key Stage 2 (ages 8-11, Years 5-7 in NI), as emotional wellbeing and self-esteem in childhood are strongly associated with positive mental health in adulthood. Nurturing these skills in primary school, can lay the groundwork for more complex competencies to develop through adolescence and into adulthood (Gedikoglu 2021).

Subsequently, if SEL is not strengthened at an early age, weaknesses in children's emotional and social development may emerge, potentially manifesting as challenging behaviours in later years (O'Connell et al. 2009). This reinforces the case for preventative rather than reactive approaches, and discourages reliance on what Hadorn (1991, cited in O'Connell et al. 2009, p. xiv) terms "*the rule of rescue...the powerful human proclivity to rescue endangered life.*" O'Connell et al. (2009) estimate that between 14% and 20% of young people will experience a mental, emotional, or behavioural disorder, with over half of all adult cases of diagnosable mental illness beginning by age fourteen. Therefore, cultivating strong social and emotional foundations early on is essential in ensuring children develop the capacity to regulate emotions, manage stress, and engage empathetically with others (Allen 2011).

While SEL is often discussed alongside related constructs such as mindfulness and cognitive behavioural interventions, it is important to distinguish between these approaches. SEL, as defined by CASEL and adopted in this thesis, refers specifically to the development of core intrapersonal and interpersonal competencies through educational processes, rather than therapeutic or clinical models such as CBT. Although mindfulness practices, including mindful yoga, are sometimes embedded in SEL curricula, they are not synonymous with SEL itself. These practices must be evaluated with care, particularly in light of emerging evidence of unintended effects when applied in school settings without appropriate adaptation or support (Lomas et al. 2017; Dunning et al. 2022; Galla et al. 2024).

2.4.2 SEL interventions: Challenges and best practices

Systematic reviews of SEL interventions consistently highlight their positive impact on social-emotional competencies, behaviour, mental health, and academic performance. However, effectiveness varies depending on factors such as programme design, developmental stage, implementation quality, and contextual factors (Durlak et al. 2022). This is further highlighted by Murano et al. (2020) in that successful delivery requires teachers to demonstrate sociocultural awareness and incorporate cultural relevance into their teaching practices. McClelland et al. (2017) suggest more research is needed to understand which groups benefit most and under what conditions, as tailored approaches may be needed for

particular populations and contexts. For example, there is a lack of data on the differential effects of SEL programmes across various subgroups, such as pupils from low socioeconomic backgrounds, ethnic minorities, and those with special educational needs (Wigelsworth et al. 2022).

Considering the heavy workload teachers face, with larger class sizes, reduced staffing, and mounting accountability pressures, it is not surprising that they have little time to stay updated with the latest educational research (Wilkin et al. 2025). Moreover, Evans et al. (2015a) observed a notable scepticism among schoolteachers regarding new interventions. For example, some teachers dismissed their intervention (Student Assistance Programme) as, *“Just another thing which the school have put money into and it’s probably not going to work,”* reflecting a lack of emotional investment in such initiatives (Evans et al. 2015a, p. 760). While this sentiment reflects low emotional investment, implementation science suggests that scepticism is shaped by systemic factors. Schools, as complex social systems, respond to interventions through established patterns, norms and feedback loops that strive to maintain equilibrium (Moore et al. 2019). Interventions may be resisted or assimilated based on their perceived alignment with existing practices, the system’s starting point, and historical experiences with reform.

In addition to concerns about effectiveness, some scholars have highlighted the potential for adverse effects. For instance, certain SEL interventions may inadvertently increase anxiety in children if emotional topics are introduced without adequate support structures, or if practices such as mindfulness are poorly framed or culturally mismatched (Evans et al. 2015b; Galla et al. 2024). As such, it is essential to assess not only whether SEL programmes work, but also whether they are safe, contextually appropriate, and equitable.

Importantly, this scepticism also reflects broader concerns about opportunity cost. When schools invest limited time, staffing, and financial resources into interventions that are ineffective, they risk displacing programmes with stronger evidence of impact. Such displacement can undermine trust and contribute to reform fatigue. To support implementation, it is therefore recommended that programme resources be embedded within current teaching plans, rather than introduced as additional standalone demands (Day et al. 2019).

Additionally, SEL programmes must be culturally responsive, meaning, they should align with the specific cultural values, beliefs, and customs of the learners (Jagers et al. 2018; Hayashi et al. 2022). Cultural adaptations are evident in the Fun FRIENDS programme (Hosokawa et al. 2024), which was modified to reflect Japan's cultural emphasis on collectivism and social harmony. This involved integrating group-based activities that promote cooperation, mutual support, and shared responsibility. In Japanese society, maintaining group cohesion often takes precedence over individual emotional expression. Accordingly, the programme was adjusted to promote empathy and cooperative behaviours within group settings, rather than focusing solely on personal emotional expression. Given that Japanese children are socialised to suppress outward signs of distress to uphold harmony, the intervention emphasised understanding others' emotions in a way that aligns with cultural expectations, rather than encouraging overt self-expression (Matsumoto et al. 2008).

Moreover, Japan's education system strongly prioritises academic success from an early age. This focus on academic performance frequently takes precedence over the development of non-academic abilities, such as social-emotional skills. Research suggests that Japanese parents and educators may place greater value on academic achievement than on social and emotional growth (Hosokawa et al. 2024). This perspective may act as a barrier to SEL integration, particularly from a socio-ecological standpoint, where parental engagement is often critical.

Recognising these cultural factors is essential when evaluating the effectiveness of SEL programmes. However, many evaluations fail to address the real-world complexities of programme implementation. Evans et al. (2015b) caution against the 'unintended consequences' of SEL interventions wherein some interventions may inadvertently have adverse effects on participants. They introduce the concept of 'intervention capital', whereby pupils may gain social status following participation in targeted SEL interventions. Since selection is often based on behavioural difficulties, participants may be perceived by peers as 'naughty' or problematic, potentially reinforcing anti-school attitudes (Cho et al. 2005). In some cases, maintaining such social status or 'bragging rights', may require continued resistance to the intervention's objectives, thereby reinforcing negative behaviours and undermining the intended outcomes (McCord 2003). Therefore, more

research is needed to examine how different groups respond to SEL interventions, and what implications this has for programme design and preparation requirements.

Evans et al. (2015b) also emphasise the need for high quality training to support the effective implementation of SEL interventions, providing teachers with extensive knowledge and technical expertise. Such training should not be limited to brief, one-off sessions, but should be sustained through ongoing professional development opportunities that build teacher confidence and competence over time (Herlitz et al. 2020). In school settings, teachers may not always be optimally equipped to deliver SEL content, particularly when specialist knowledge is required. This emphasises the a pressing need for enhanced training and continual professional development to enable teachers to both implement SEL programmes effectively and model the competencies they aim to teach (McClelland et al. 2017).

However, the implementation of such training demands time, a scarce and heavily contested resource within schools. Without clear guidance on how SEL initiatives integrate within existing curricula, or what academic or pastoral duties they may displace, even well-intentioned interventions may prove difficult to sustain (March et al. 2022). Ensuring teachers are well supported through both initial and ongoing training is therefore critical to sustaining the fidelity, effectiveness, and long-term viability of SEL interventions in dynamic school environments (Evans et al. 2015a).

2.4.2.1 Specifying mechanisms of change within SEL interventions

While high quality training is essential for effective implementation, there is also increasing need to understand the specific mechanisms within SEL programmes that drive positive outcomes. Although many SEL interventions have demonstrated overall effectiveness, relatively little is known about which specific components are most influential, or how different elements interact to shape outcomes. Disassembling multi-component programmes enables researchers to evaluate the relative contributions of specific skills and strategies (de Manincor et al. 2015).

For example, Connolly et al. (2018), evaluated the *Roots of Empathy* programme finding that while children demonstrated improved prosocial behaviour and reduced behavioural issue, there was no significant impact on empathy or emotional regulation. This suggests that observed behavioural changes may result from indirect or cumulative effects of multiple components, rather than from the direct development of empathy alone. Such findings highlight the need to move beyond surface level outcome measures and towards a more nuanced understanding of the processes and pathways through which SEL programmes exert their effects (White et al. 2023).

Building on this, Durlak et al. (2022) emphasise the importance of specifying and measuring the mechanisms of change within SEL interventions more systematically. Their work highlights that assuming all programme components contribute equally can obscure understanding of what truly drives effectiveness. Disassembling interventions and identifying the most impactful skills or approaches can help streamline SEL delivery and increase scalability (Herlitz et al. 2020). It also facilitates better adaptation to varying developmental stages, cultural contexts, and educational settings. Moreover, clear specification of mechanisms can support more accurate evaluation, enabling researchers and practitioners to assess not just whether SEL programmes work, but how and why they produce their effects (Blase and Fixsen 2013).

While specifying internal mechanisms is crucial for optimising SEL interventions, attention must also extend to the broader contextual and ecological factors that shape their implementation and outcomes. A whole school approach is widely advocated in the literature, as a means of enhancing SEL implementation (World Health Organisation 2023). However, ambiguity remains regarding what precisely constitutes a whole school approach and its specific components (Gobat et al. 2021). As with individual programme components, more clarity and rigorous evaluations are needed to assess the effectiveness of different elements within whole school approaches (Wigelsworth et al. 2022).

To bridge this gap, (McClelland et al. 2017) recommend increasing efforts to involve families in SEL interventions to reinforce skills at home and create a consistent support system for the children. If a whole school is to include parental input, Hosokawa et al. (2024) emphasise the importance of enhancing SEL in early childhood education policy to achieve

lasting positive impacts on child development. However, from a regional context, policy in NI has long been influenced by tribalism rather than decisions being based on '*the wider social need*' (Brown et al. 2022, p. 380). This accentuates the importance of ensuring SEL policies and practices are aligned with broader social and educational objectives to maximise their effectiveness.

2.4.3 Self-Regulation and emotional development

Central to SEL is the capacity for self-regulation, a multifaceted construct involving the management of attention, emotion, and behaviour, it encompasses processes such as emotional regulation, behavioural inhibition, and strategic planning (Nigg 2017). Self-regulation is consistently associated with educational attainment, interpersonal competence, and broader life outcomes (Galinsky 2010). Furthermore, self-regulation has been identified as a key component of school readiness and a predictor of both academic achievement and social competence (Woltering and Shi 2016). Failure to acquire these early learning skills may cause children to fall behind their peers, leading to an ever-widening gap over time (McClelland et al. 2017). The Institute of Education at University College London (UCL) reviewed evidence from a major British cohort study that tracked individuals born in 1970 through to their forties. Of the five key aspects of social and emotional skills considered, self-regulation was found to be the strongest predictor of adult outcomes (Feinstein 2015).

Effective self-regulation has been linked to positive mental wellbeing, good physical health, beneficial health behaviours, and more favourable socio-economic and labour market outcomes (Allen 2011; Nigg 2017). From a developmental perspective, emotional regulation is fundamental to successful socially and academic adaptation. It can either positively contribute to or undermine a wide range of skills and proficiencies (Kubzansky et al. 2011). Feinstein (2015) further supports this perspective, identifying self-regulation/self-control as one of five core aspects of social and emotional capability, alongside self-awareness/self-esteem, motivation, social relationship and communication skills, and resilience and coping. Sheridan (2008) argues that self-regulation involves maturing attention, emotional regulation, and planning and organising abilities. Its development is influenced by genetic

temperament, emotional experience, and attachment relationships with parents or guardians. The ability to feel, react to, and express emotion can have both short and long-term effects on physical and mental health (Menezes et al. 2015). Effective emotional regulation has been shown to enhance wellbeing (Razza et al. 2015), benefit cardiorespiratory health (Kubzansky et al. 2011), and offer lasting psychological protection, including reduced likelihood of conditions such as Major Depressive Disorder (Suri and Gross 2012). Conversely, poor emotional regulation has been linked to diminished psychological health and the onset of various mental disorders and is considered to *“hold almost unparalleled importance to mental health”* (Nigg 2017, p. 2). Kanske et al. (2012) suggest that impaired emotional regulation is a characteristic indicator of depression, while Suri and Gross (2012) and Strauman (2017) argue that depression itself may stem from a breakdown in self-regulatory processes.

Although the development of self-regulatory coping skills can support children in managing stress (Noggle et al. 2012), it is important to recognise that adolescents undergo significant neurological transitions. The limbic system, which governs emotional responses, typically matures around age 13, whereas the prefrontal cortex, responsible for emotional regulation, continues to develop into the mid-twenties. This mismatch, often likened to *“driving a Ferrari with bicycle brakes”*, helps explain the heightened emotional reactivity and regulatory challenges commonly observed during adolescence (Coulson 2013). These biological realities emphasise the importance of strengthening emotional regulation during this formative period (McMahon et al. 2021). Consequently, the early cultivation of SEL is increasingly recognised as a foundational strategy, not only for promoting individual wellbeing, but also for supporting broader societal outcomes. (Florez 2011; Feinstein 2015). Within the NI context, the PDMU curriculum reflects this priority, identifying emotional regulation development as vital for academic success and lifelong resilience (Council for the Curriculum Examinations & Assessment 2007).

While individual self-regulation is important, it does not exist in isolation. Broader structural determinants of health, such as poverty, inequality, and systemic disadvantage exert a significant influence on children’s ability to acquire and sustain these skills over time. These upstream factors can constrain opportunities for emotional growth and resilience, particularly among children facing multiple forms of adversity. Nevertheless, recognising

these contextual constraints should not lead to inertia. As Rose (2001) notes, even modest gains distributed across a population can produce substantial public health benefits over time. Similarly, Durlak et al. (2011a) argue that although the individual level effects of school based SEL programmes are often modest at the individual level, their cumulative impact across large populations can be meaningful. Within this pragmatic framing, this thesis explores yoga as a school-based intervention that, while not a solution to structural inequalities, may offer a practical way to support children's emotional regulation and wellbeing within the spheres schools can influence (Cook-Cottone 2017).

2.5 The practice and benefits of yoga: Historical insights and modern applications

Extensive literature has emerged on various methods for developing and promoting children's social and emotional skills (Sheard et al. 2013; Connolly et al. 2018; Humphrey et al. 2018). Among these methods, a growing body of research has linked school-based yoga programmes to the enhancement of SEL (Butzer et al. 2015a; Butzer et al. 2015b; Razza et al. 2015). Additionally, yoga-based interventions have gained traction for their potential to mitigate the impact of crises and promote resilience. For example, Goldberg (2016) notes that yoga programmes have often emerged as rehabilitative responses to specific crises, such as "*Bent on Learning after 9/11*", and "*Yoga in Schools*" to address systemic issues relating to poverty and crime. Nevertheless, more schools are seen to be utilising mindful yoga as a preventative measure to enhance children's social and emotional wellbeing, potentially empowering them with the tools to better navigate life's stressors (Case-Smith et al. 2010; Butzer and LoRusso 2021; McMahon et al. 2021).

Traditional interpretations of yoga, rooted in ancient Indian philosophy, conceptualise it as a holistic system for achieving balance across physical, mental, and spiritual domains (Desikachar 1999). However, it is important to recognise that these historical sources, including texts and commentaries, were not subject to the empirical validation or peer review processes characteristic of modern scientific research. As such, the following discussion presents traditional perspectives as valuable cultural and philosophical frameworks that inform, but are distinct from, contemporary evidence-based applications of yoga.

The word ‘yoga’ stems from the Sanskrit word ‘yuj’, which translates to ‘yoke’ or ‘to join’. Other definitions include uniting, being present in every action and every moment, and directing and concentrating one’s attention (Lawrence and Paul 2014). Historically, yoga was also perceived as a method for regulating ‘mental instabilities’, improving concentration, and maintaining homeostasis to prevent disease (Menezes et al. 2015). Central to the philosophy of yoga is the concept of mind-body equilibrium, described by Bennett (2011, p. ix) as follows:

There exists within everyone a place of balanced awareness, yoga provides you with the tools to find this place and create deeper states of emotional and physical wellbeing.

Yoga has traditionally been regarded as a systematic approach to self-development across physical, vital, mental, intellectual, and spiritual dimensions (Nagarathna et al. 1990). One of the foundational texts of classical yoga, *The Yoga Sutras* by Patanjali (Desikachar 1999; Woodyard 2011), articulates this philosophy through the concept of the Eight Limbs of Yoga, as illustrated in Figure 2.1. Among these limbs, asana (the practice of physical postures) is the aspect most familiar in contemporary contexts. However, within traditional frameworks, asana is seen as a preparatory step for deeper psychological and spiritual work (Butterfield et al. 2017).

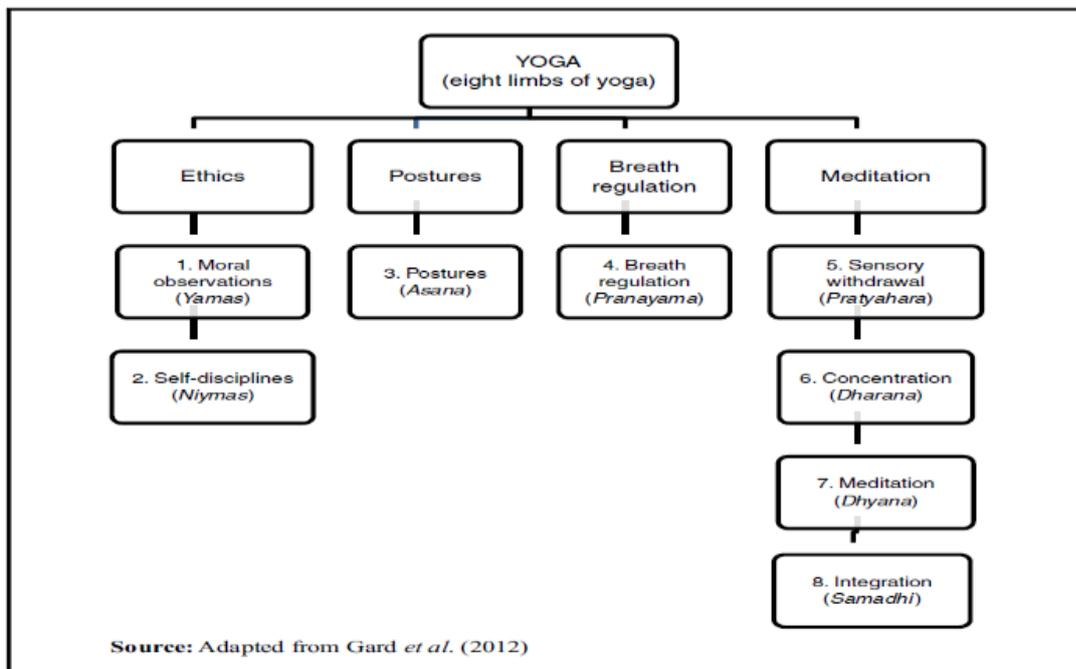


Figure 2.1: Yoga self-regulation model based on the eight limbs of yoga (Butterfield et al. 2017, p. 49)

Nagarathna et al. (1990) propose that disciplined practice of asana represents a fundamental step towards expanding consciousness and gaining mastery over the mind. Nonetheless, it is important to recognise that this interpretation reflects a traditional philosophical framework and may not be universally endorsed across all schools of yoga practice, particularly those shaped by modern scientific paradigms.

The final three limbs: *Dharana* (concentration), *Dhyana* (meditation), and Samadhi (absorption) are collectively referred to as Samyama, which involves deepening stages of focused attention. Samyama practices may involve concentration on natural environments, symbolic images, or internal states (Lawrence and Paul 2014). The term itself combines *sam*, (together) and *yama* (discipline), reflecting the structured cultivation of focused awareness over time (Desikachar 1999; Bennett 2011).

Although embedded within a classical metaphysical framework, practices such as asana, pranayama (breath control), and meditation have been adapted in modern settings to emphasise their psychological and physiological benefits (Zaccaro et al. 2018; Boukhris et al. 2024). As such, they have become integral components of contemporary interventions aimed at promoting self-regulation, resilience, and social and emotional wellbeing (de Manincor et al. 2015). For instance, slow breathing techniques have been shown to enhance emotional relaxation by increasing heart rate variability and modulating brain activity linked to psychological flexibility and wellbeing (Boukhris et al. 2024). These effects are thought to arise through both interoceptive awareness and neural pathways influenced by nasal breathing (Zaccaro et al. 2018). This growing body of evidence has informed the emergence of modern yoga interventions, which will be explored in greater detail in the following section.

2.5.1 Mindful Yoga – Postures (Asana), Breath (Pranayama), and Mindfulness

In contemporary practice, samyama is closely associated with the concepts of mindfulness and meditation. Across the literature, the terms mindfulness, meditation, and mindful yoga are often used interchangeably although they represent distinct concepts. Mindfulness refers to a state of awareness involving present moment attention without judgement (Kabat-Zinn 2003), while meditation is a formal practice aimed at training the mind through

specific techniques (Keng et al. 2011). Mindfulness meditation focuses specifically on cultivating mindfulness through activities such as body scans or focused breathing exercises.

Desikachar (1999) notes that awareness can be anchored in the breath, or on a fixed gaze-point (*Drishti*) during asana practice, supporting the cultivation of mindfulness. The Holistic Life Foundation (HLF) defines mindfulness as:

The combination of awareness, centring, and being present. That is, mindfulness is awareness of your thoughts, emotions, actions, and energy; the ability to get centered in all situations; and the ability to be present, not letting internal and external distractions take you from the current moment (Feagans Gould et al. 2014, p. 63).

The term 'mindful yoga' refers to the integration of structured movement and focused breathing, encouraging attention to bodily sensations, thoughts, and emotions while performing yoga poses (Feagans Gould et al. 2014). Long and Macivor (2009) describe modern yoga as integrating Western anatomical and physiological knowledge with Eastern philosophies and pranayama practices, thereby offering combined physical and psychological benefits.

Consequently, it is important to examine the physiological mechanisms underlying yoga's potential effectiveness, particularly the role of mindful breathing in promoting self-regulation, a core component of SEL development (see Figure 2.2). Numerous studies (Birdee et al. 2009; Durlak et al. 2011b; Serwacki and Cook-Cottone 2012a; Hagen and Nayar 2014; Butzer et al. 2015b; Ferreira-Vorkapic et al. 2015; Khalsa and Butzer 2016) have established positive associations between yoga participation, self-regulation capacities, and enhanced wellbeing.

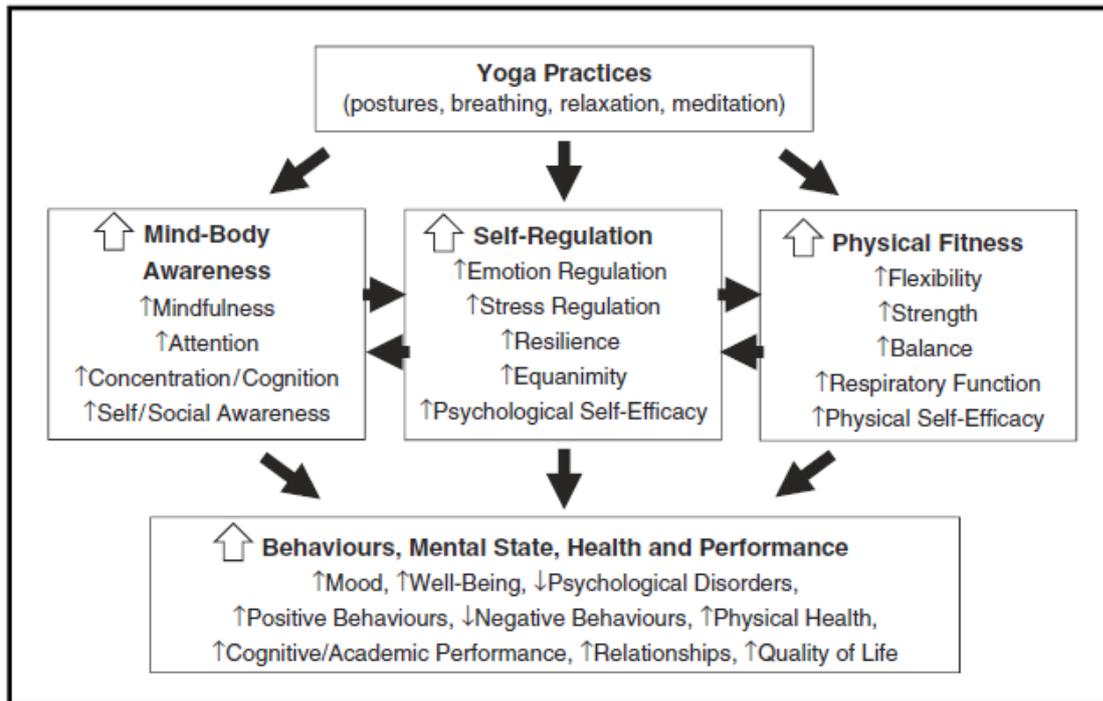


Figure 2.2: Hypothesised associations between yoga practice, self-regulation, mind-body awareness, physical fitness, performance, health, mental state, and behaviours (Butzer et al. 2016, p. 8).

Instrumental to these positive associations is the interplay between breath and movement, as physical yoga practice encourages mindful movement and deepens self-awareness through conscious breath control (Coulter 2004). Regulating the breath during postures produces chemical changes within the body inducing a relaxed but focused calmness (Chen and Pauwels 2014a; Chen and Pauwels 2014b). Breathing practices interact with the autonomic nervous system, promoting parasympathetic activation and reducing the physiological stress response (White 2012). Mindful breathing thus is associated with enabling individuals to manage stress, enhance self-regulation, and promote overall wellbeing (Fincham et al. 2023). Moreover, attending carefully to the muscles engaged during postures supports both the physical and psychological dimensions of yoga practice (Long 2011). This integration of breath, movement, and attention is consistent with Patanjali’s understanding of yoga and the balance of mind and body as he states:

“Yoga is the ability to direct the mind exclusively toward an object and sustain that direction without any distractions” (Patanjali 400 CE, cited in Desikachar 1999, p. 149).

Through structured practice, individuals may cultivate the ability to direct attention with clarity and resilience. By reducing cognitive distractions and emotional reactivity, yoga has the potential to enhance psychological and physiological balance (Coulter 2004). In this way, yoga may offer a structured pathway toward greater emotional regulation, stress management, and holistic wellbeing. However, although the historical foundations and modern adaptations of yoga highlight its potential to support emotional regulation and wellbeing, translating these practices into school environments necessitates thoughtful adaptation and an awareness of broader contextual challenges.

2.5.2 Adapting yoga for children

Yoga may hold the potential to support a wide range of pupils by offering an inclusive, adaptable approach to movement and self-awareness. For children with a background in traditional sports or physical education, yoga's mindful practices may enhance performance and reduce injury risk by nurturing greater awareness of the musculoskeletal system (Yaffa and Yaffa 2016). Conversely, those who are not involved in traditional, organised sports may find yoga more accessible, as it is non-competitive, and centred on individual abilities. This makes it particularly promising for children with physical and/or mental impairments, offering a flexible alternative to mainstream physical education (Chen and Pauwels 2014a). Furthermore Cook-Cottone (2017, p. xi) highlights the broader value of mindfulness within educational settings, observing that:

“Mindfulness and embodiment can give students the gift of themselves. It is in the present moment, completely embodied and engaged, and full of intention that our lives happen, and futures are made. It is in the present moment that real learning occurs. No matter how sophisticated, research based, and wonderful your curriculum is, if your students are not present, they will not learn.”

This perspective emphasises the potential of yoga to cultivate presence and engagement in the classroom, enhancing both learning and emotional wellbeing. However, while yoga is widely praised for promoting mindfulness and self-regulation, it is not a one-size-fits-all solution. Some children may find yoga challenging due to physical disabilities, sensory sensitivities, or trauma histories (Hagen and Nayar 2014). For instance, some children may

experience discomfort or distress in certain poses, while others may struggle with the abstract nature of meditation.

Moreover, the effectiveness of yoga is highly dependent on the quality of instruction and the pedagogical approach. Evidence suggests that yoga programmes in education yield the greatest benefits when led by well-trained practitioners who understand children's developmental needs and are sensitive to cultural and contextual sensitivities (Khalsa and Butzer 2016)(Cook-Cottone et al. 2019). Conversely, poorly implemented yoga programmes may have limited or even negative effects (Cook-Cottone 2017). Despite this, there is considerable variability in the qualifications of those delivering yoga in educational settings, with no standardised training requirements across schools (Khalsa and Butzer 2016). This highlights the importance of adequate training and professional preparation to ensure yoga is delivered safely, inclusively, and in alignment with SEL objectives. (Cook-Cottone 2017).

While professional bodies typically recommend a 200-hour foundational training, often supplemented with children's yoga certification, such training demands a substantial investment of time and resources (Yoga Alliance Professionals 2024). In the UK, costs for 200-hour courses range from approximately £1,800 to £4,500, typically spread over six to twelve months (Santosh Yoga 2025; Yoga Alliance Professionals 2025; Yoga Haven 2025). Intensive international options can be even more expensive, with one-month residential programmes costing between £3,728 and £6,287 (Samahita Yoga 2025). This raises important considerations for scalability, some schools may have motivated staff or external instructors willing to pursue these qualifications, while others may not. Without adequate training, yoga programmes risk being poorly implemented, potentially diminishing their effectiveness, or even causing harm (Feagans Gould et al. 2016; Jackson 2020).

It is also important to recognise that not all mindfulness-based interventions in schools lead to positive outcomes. The MYRIAD trial (My Resilience in Adolescence), a large-scale UK study involving over 8,000 students, found no overall benefits of school-based mindfulness training when delivered at scale (Kuyken et al. 2022). More notably, the study identified that students with high baseline risk factors (e.g., those already experiencing mental health difficulties) showed worsened outcomes in some cases, including increased hyperactivity and conduct problems (Montero-Marin et al. 2022). These findings highlight the need for

cautious, context-sensitive implementation, with particular attention to identifying vulnerable subgroups and ensuring that programmes are not applied as blanket solutions. Such evidence reinforces the broader argument that yoga, and any mindfulness-based approach, should be adapted carefully, supported by well-trained instructors, and subject to ongoing evaluation to avoid unintended consequences. Thus, ensuring that yoga is delivered safely, inclusively, and in alignment with SEL objectives requires not only pedagogical and developmental understanding, but also systemic attention to the feasibility and equity of implementation (Durlak et al. 2022).

Furthermore, although yoga is promoted as a disciplined mode of physical activity to attain both physiological and emotional balance, caution is advised in the approach of any intervention. Hagen and Nayar (2014, p. 4) emphasise that yoga pedagogy must be tailored to the specific needs of the target group. When working with children, a multi-disciplinary approach is necessary, yet this needs to be infused with play and fun. They argue that,

“If we can communicate with children and young people effectively, they can adopt yoga as a powerful tool for themselves to minimize stress, as well as develop resilience to deal with it.”

There are a myriad of styles and approaches to teaching yoga, as well as a depth to the practice that may include ethical, psychological and philosophical study. However, in an effort to define yoga for the school setting while retaining its core components, (Childress and Cohen Harper 2015, pp. 2-3) describe it as, *“a set of practices that includes postures or movements, breath work, focused attention, and deep relaxation.”* This definition captures the essence of yoga’s adaptability, providing a foundation for integrating it into educational environments in a way that balances tradition with modern pedagogical needs.

While adapting yoga to suit children’s developmental needs is essential, the structure and delivery of yoga sessions play a critical role in ensuring its effectiveness. A well-designed class should incorporate age-appropriate practices that foster engagement, mindfulness, and self-regulation, aligning with the varying cognitive abilities of young participants. (Cook-Cottone 2017). By integrating elements such as breathwork, movement, and relaxation techniques, yoga classes can create a supportive and structured learning environment. To achieve this, it is necessary to consider how class duration, sequencing, and instructional

methods contribute to an optimal experience (de Manincor et al. 2015). The following section outlines recommended class structures for different age groups, drawing on established frameworks and best practices from school-based yoga programmes (Butzer et al. 2015b; Martin et al. 2024; Wilkin et al. 2025).

2.5.3 Yoga class structure for children

Traditional yoga classes can vary in length and structure, though a ‘typical’ yoga class would span from forty-five to ninety minutes (Appendix 1). Classes are generally segmented into three primary phases, a preparatory phase, a main phase, and a closing phase (Lawrence and Paul 2014). The preparatory phase usually commences with centring exercises and gentle warm-up activities that incorporate breathwork (pranayama), to cultivate mental focus and prepare the body for movement. Following this, a sequence of yoga poses (sun salutations) can be used to transition into the main phase, incorporating further poses to develop muscular strength, flexibility, and endurance (Atkinson and Permuth-Levine 2009; Goldberg 2016). The closing phase includes deep stretching, relaxation, and/or meditation to facilitate both physical and mental relaxation, with the purpose of enabling participants to assimilate the benefits of the practice (Desikachar 1999).

Established yoga for schools programmes in the United States such as “*Yoga Ed*” and “*YoKid*” provide separate teaching recommendations for specific age groups (Butzer et al. 2015b), an approach evident in both the USA, and in NI (Cook-Cottone 2017; Hamill and Kinane 2020) (See table 2.3).

Table 2:3: Yoga class recommendations by year group

Age	UK Years		US Grades	Caleda & Bond (2014)	Cook-Cottone (2017)	Hamill & Kinane (2021)
4	Reception	Foundation	Pre-Kindergarten	20-30 mins	15-45 mins	20-45 mins
4-5	Year 1		Kindergarten	30-45 mins		
5-6	Year 2		1 st Grade			
6-7	Year 3	Key Stage 1	2 nd Grade	45-60 mins	20-45 mins	20-60 mins
7-8	Year 4		3 rd Grade			
8-9	Year 5	Key Stage 2	4 th Grade	60-90 mins	45-60 mins	
9-10	Year 6		5 th Grade			
10-11	Year 7		6 th Grade			

Consequently, Childress and Cohen Harper (2015) advise caution in the compilation of any yoga programme in relation to the developmental appropriateness of any practice being delivered. Age-based recommendations (Cook-Cottone 2017, p. 221) suggest longer, sessions aligned with a more “*formal class structure*” for older year groups and shorter sessions for younger and less experienced children. To add weight to this point, (Childress and Cohen Harper 2015, p. 30) emphasise the need to take into consideration, not only the child’s age, but also their “*emotional, social, physical, and psychological readiness for the practices offered.*”

Cook-Cottone (2017) identified three key reviews of research based on yoga in school; Serwacki and Cook-Cottone (2012a), Ferreira-Vorkapic et al. (2015), and Khalsa and Butzer (2016). Building on this, a literature search identified four further reviews; Miller et al. (2020), Hart et al. (2022), Wilkin et al. (2024), and Martin et al. (2024). Complementing these findings, Butzer et al. (2015b) conducted a survey of established school-based yoga programmes, with a focus on implemented practices rather than research interventions. To provide a comprehensive overview, Table 2.4 and Table 2.5 present a summary of six of these reviews, alongside the Butzer et al. (2015b) survey. The tables highlight the diverse approaches to integrating yoga practices across different contexts, emphasising flexibility in session structure and focus. Nevertheless, they identify core components including poses, breathing exercises, relaxation techniques, mindfulness practices, and meditation, with these often combined with supplementary elements such as guided imagery, music, and interactive discourse. Program durations varied significantly, ranging from three to twelve weeks, with session lengths spanning 30 to 90 minutes. Weekly frequencies were similarly variable, from once weekly formats to more intensive schedules with up to four sessions per week.

While these structured formats are valuable, such durations can be challenging to accommodate within a typical school timetable. Allocating 30 to 60 minutes for yoga requires careful consideration of what existing activities may be reduced or replaced, a non-trivial decision for schools under time and curriculum pressures (Evans et al. 2015a). To address this, several programmes and studies propose more flexible integration models. For instance, classroom teachers implemented short yoga based mindfulness activities during natural transition periods (e.g., before lunch, after break, or during morning arrival) to

support focus and self-regulation (Razza et al. 2015). These informal, teacher led practices were embedded within the daily routine without requiring dedicated curricular space.

In contrast, other models, such as the “Yoga 4 Classrooms” are designed as structured interventions. Butzer et al. (2015a) implemented this programme in second and third grade classrooms through twice weekly, 30-minute sessions delivered by a trained instructor. Each session included physical postures, breathing exercises, and mindfulness techniques, aiming to improve pupil behaviour and classroom climate. Although more time intensive, such programmes may be more feasible in schools with in-house certified staff, designated wellbeing periods, or external facilitation support. Additionally, some schools adopt extracurricular or after school delivery models, offering weekly sessions of up to an hour to promote emotional and psychosocial wellbeing (Berger et al. 2009; Velásquez et al. 2015). Small group interventions have also been used to target specific needs, such as anxiety reduction or emotional regulation, allowing for tailored approaches in lower ratio settings (Bazzano et al. 2018).

These varied approaches demonstrate that yoga need not adopt a rigid approach. Instead, implementation can be adapted to suit the school’s specific demands, student developmental stages, and available staff and resources. This flexibility helps maximise accessibility without compromising instructional or therapeutic integrity, as long as programmes are carefully structured to retain the core components (Feagans Gould et al. 2014; Feagans Gould et al. 2016). While structuring yoga classes appropriately enhances engagement and effectiveness, its impact extends beyond physical benefits. Yoga is increasingly recognised for promoting self-regulation, emotional resilience, and cognitive focus within SEL (Butzer et al. 2016). However, its integration in schools raises discussions around cultural adaptation, secularisation, and pedagogy. The next section explores these considerations, examining yoga’s role in SEL and its implementation in diverse educational settings.

Table 2:4: An overview of school-based yoga interventions and established programmes (a)

Authors & Title	Details
Serwacki, & Cook-Cottone 2012. Yoga in the schools: a systematic review of the literature.	<p>Twelve studies met their inclusion criteria for the review, 10 were within the Primary school age range.</p> <p>Program durations: ranged 3-12 weeks, 1-7 times per week, with sessions ranging 30 to 90 minutes.</p> <p>Key components: Physical postures, breathing exercises, relaxation techniques, and mindfulness and meditation practices</p> <p>Additional components: guided imagery, interactive discussion, role playing, games, music, and visual aids</p>
Ferreira-Vorkapic et al. (2015) Are There Benefits from Teaching Yoga at Schools? A Systematic Review of RCT Yoga-Based Interventions.	<p>Nine studies met their inclusion criteria, four included participants within the 4-12 age group (M=9.9)</p> <p>Programme durations: ranged from 8-25 weeks, 1-5 times per week, with sessions ranging 15 to 90 minutes</p> <p>Key components: centring and conscious breathing, yoga postures, yoga breathing techniques, meditation, guided relaxation</p> <p>Additional components: chanting, daily 10-minute home practice, ringing of tingsha bells (for focus breaks)</p>
Butzer et al. (2015b) School-based Yoga Programs in the United States: A Survey. <i>Advances in mind-body medicine</i> 29(4), pp. 18-26.	<p>Established yoga programmes as opposed to Interventions. Thirty-six programmes that offer yoga to 940 schools. 75% (27 of 36) from preschool through grade 12, remaining programmes focus on specific age groups such as elementary, middle, or high schools.</p> <p>Key components: Physical postures, breathing exercises, relaxation techniques, and mindfulness and meditation practices</p> <p>Additional components: didactic elements, such as ethics, philosophy, or psychology lessons. Games, songs, arts and crafts, journaling, team building</p>
Khalsa and Butzer (2016) Yoga in school settings: a research review	<p>Forty-seven publications met their inclusion criteria, eighteen of these were within an elementary school setting.</p> <p>Program durations: ranged 1-52 weeks, 4-90 minutes,</p> <p>Key components: Physical postures, breathing practices, relaxation techniques, and mindfulness and meditation.</p> <p>Additional components:</p>

Table 2:5: An overview of school-based yoga interventions and established programmes (b)

Authors & Title	Details
Miller et al. (2020) Systematic review of randomized controlled trials testing the effects of yoga with youth	<p>Thirty-nine RCTs, 29 in schools. Thirteen of these were in the Primary school age range.</p> <p>Program durations: ranged 1-52 weeks, 1-7 days per week, 30-60 minutes</p> <p>Key components: centring exercises, Physical postures, breathing practices, relaxation techniques, mindfulness & meditation.</p> <p>Additional components: singing and chanting</p>
Martin et al. (2024) Yoga in schools that contributes to a positive classroom atmosphere for young children and educators: a PRISMA scoping review	<p>Fourteen studies, ten within the primary age group.</p> <p>Programme modes & durations: ranged 6-104 weeks, 2-6 days per week</p> <p>Key components: Physical postures, breathing exercises, meditation, & mindfulness</p> <p>Additional components: songs, stories, and visual images</p>
Wilkin et al. 2024) The effects of school-based yoga on the executive functioning skills of children between three and seven years of age. A meta-analysis	<p>Seven studies involving a total of 1080 participants, ages 3-7.</p> <p>Programme modes & durations: Instructor and video tape led, ranged 1-25 weeks, once weekly to daily sessions, 10-30 mins</p> <p>Key components: Physical postures, breath regulation, relaxation, meditation, & mindfulness</p> <p>Additional components: songs, stories, and visual images</p>

2.5.4 The role of Yoga in SEL: Cultural adaptation, mechanisms of impact, and educational integration

Despite the growing evidence supporting yoga as a beneficial intervention for SEL, several critiques warrant consideration. One key concern is the cultural appropriateness of yoga, particularly in contexts where religious affiliation exerts significant influence on policy and pedagogy (Hayward and McManus 2020). Yoga has roots in spiritual and philosophical traditions, including Hinduism, Buddhism, and Jainism, yet its integration into schools often involves a significant secularisation (Cook-Cottone et al. 2019). This has led to concerns that yoga is being reduced to a set of physical exercises, stripped of the values and principles that once gave it coherence (Jain 2014). A similar critique has been levelled at mindfulness. Purser (2019), for example, argues that when mindfulness is divorced from its ethical foundations, it may inadvertently reinforce existing social inequalities rather than develop meaningful change.

These perspectives raise important questions, not only about cultural authenticity, but also about effectiveness. If yoga's transformative potential depends on certain philosophical or ethical components, a critical question emerges: to what extent can it be secularised without undermining its efficacy? This then becomes not just a cultural debate, but a scientific one (Matko et al. 2021). If key mechanisms for change (e.g., compassion, self-reflection, ethical restraint) are essential for outcomes yet rooted in religious traditions, then adapting yoga for schools may hinder its impact, and potentially its scalability.

Huynh (2021) offers a pragmatic response to this tension. Writing from an American context shaped by the First Amendment² (United States Government 1791), he argues for the importance of secularising mindfulness practices in public schools to ensure inclusivity. However, rather than ignoring religion, he advocates for a balanced approach teaching students about diverse religious traditions, both Western and Eastern in a way that nurtures global awareness and cultural competence while grounding implementation in scientific evidence (Huynh 2021). Reynolds (2019) echoes this sentiment, arguing that mindfulness

² The First Amendment to the United States Constitution protects several fundamental rights, including the freedom of religion, speech, press, assembly, and the right to petition the government. Specifically, it prohibits the government from making laws that establish a religion or impede the free exercise of religion, ensuring a separation of church and state. This amendment is crucial in the context of the paper, as it addresses the legal considerations of teaching religious content, such as mindfulness practices and Bible courses, in public schools.

and yoga can help people of faith reconnect with their own contemplative traditions, highlighting compatibility rather than contradiction.

Yet concerns persist. In 2019, an Irish Bishop warned against incorporating yoga into school curricula, questioning whether such practices, “*bring us closer to Christ or replace him,*” and stating that yoga, being of non-Christian origin, is not suitable for parish schools (Skelton 2019). Similarly, the UK group Christian Concern has expressed unease over the influence of humanists and secularist perspectives in education. In their article, ‘*The death of Christian worship in our schools*’, they critique what they perceive as an increasing push for inclusion at the expense of traditional Christian values (Beego 2024).

These debates highlight a crucial distinction; the goal in school settings is not necessarily to preserve religious authenticity, rather to retain those elements of the practice that are essential for it to work, ethically, emotionally, and pedagogically. In this regard, programmes like the *Holistic Life Foundation* (HLF) offer valuable models. Feagans Gould et al. (2014) describe how HLF blends yoga principles with secular delivery. For example, Ahimsa (non-violence) is taught through compassion and empathy, while Svadhyaya (self-study) is adapted as mindful self-awareness. These concepts are presented in ways that resonate with SEL goals and are accessible to diverse student populations (see Figure 2.2).

The HLF includes two key components, ‘Core Activities’ form the foundation of each session, with controlled breathing exercises to enhance focus. Participants then engage in yoga postures and specific breathwork techniques, followed by discussions on the health and wellbeing benefits of mindfulness. Sessions conclude with guided silent reflection. To encourage continued engagement outside of class, participants are assigned mindfulness-based homework to integrate the practices into daily life. The ‘Core Processes’ emphasise creating a structured and supportive learning environment where mindfulness principles can be applied in real-life contexts. Instructors guide participants in maintaining focus, managing distractions, and reinforcing engagement. A key aspect of the programme is the emphasis on compassion, both towards oneself and others, fostering emotional resilience and self-regulation. By blending the traditional yogic elements with scientifically supported mindfulness techniques, programmes such as HLF offer a model for integrating yoga into SEL in a way that is both authentic and adaptable.

More broadly, while the cultural origins of yoga should not be ignored, their integration into school settings must prioritise developmentally appropriate, evidence informed, and culturally sensitive implementation. As Khalsa and Butzer (2016) argue, the potential for yoga to enhance mindfulness and emotional regulation is well-documented, but its success depends on how it is implemented. This includes thoughtful adaptation for age, neurodiversity, trauma history, and cognitive ability (Yaffa and Yaffa 2016; Cook-Cottone et al. 2019).

Although the literature supports yoga's role in SEL, questions remain regarding which components are essential for effectiveness, how they are best delivered, and in what contexts they are most appropriate. The following section outlines these gaps and methodological limitations to inform future research and practice.

2.6 Identified research gaps and methodological limitations

Children begin to encounter academic, emotional, and social demands from an early age, prompting a growing interest in school-based interventions that support not only physical development but also the development of emotional competencies (Goldberg et al. 2019; Herlitz et al. 2020). Yoga has been explored as one such approach, with emerging evidence suggesting benefits for self-regulation, emotional awareness, and stress reduction, key competences within SEL frameworks (Tran et al. 2001; Grabara 2016). While promising, many of these findings come from small scale or short-term studies, that lack robust methodology and long-term follow-up, limiting their generalisability and relevance to universal SEL delivery in schools (Ferreira-Vorkapic et al. 2015).

In addition to potential emotional benefits, a number of individual studies and narrative reviews across various age groups suggest that yoga may support physical health outcomes including reductions in blood pressure, improvements in posture, and enhanced body composition (Tyagi and Cohen 2014). However, systematic reviews caution that the strength of this evidence varies depending on the outcome measured and the quality of the underlying research (Field 2016). While yoga may offer supplementary benefits for managing certain chronic conditions such as low back pain and anxiety, the evidence remains mixed. Further research is needed to determine the mechanisms of change and the

conditions under which these benefits are most consistently observed (Cramer et al. 2013; Anheyer et al. 2022). Assertions that yoga supports emotional and cognitive development across the lifespan should therefore be made with caution. Many existing claims are based on teaching manuals or practitioner reports, which, although grounded in extensive professional experience and pedagogical expertise, are not designed to meet the criteria of formal peer-reviewed empirical research (Yaffa and Yaffa 2016; Hamill and Kinane 2020). There is also a tendency in the literature, and practice community, to overstate the generalisability of findings from adult clinical populations to children, or from highly controlled settings to mainstream classrooms (Gothe and McAuley 2015).

Accordingly, there is a clear need for more longitudinal, developmentally focused research using robust designs, including randomised controlled trials and context sensitive evaluations. Particular attention should be given to issues such as dosage, fidelity of implementation, and contextual factors like school culture and instructor training, all of which are further explored in the following section.

These concerns are reflected in a systematic review by Khalsa and Butzer (2016) which highlights several recurring methodological limitations in the school-based literature (see Table 2.6). The review identified 47 studies, most of which were conducted in the USA (n=30) and India (n=15) since 2005, with most (n=41) taking place from 2010 onward. Around half of these studies were carried out in elementary schools, with 85% integrated into the school curriculum and 62% implementing a structured school-based yoga programme. There was considerable variation in the characteristics of yoga interventions, including total duration, session frequency, and session length. Most of these research trials were preliminary, with several design limitations such as small sample sizes (median=74; range = 20-660) and relatively weak methodologies (57% randomised controlled trials, 19% uncontrolled trials), which is typical for an emerging field of study.

Limitations are echoed in a recent scoping review by Martin et al. (2024), which identified 14 studies examining yoga interventions in educational settings (see Table 2.7). Many of the challenges noted mirrored those in Khalsa and Butzer's (2016) review, including wide variation in programme duration, frequency, and the specific yoga practices used. Additionally, the limited sample size (n = 14) and the lack of long-term follow-up data raise

concerns about the broader applicability of findings across different school settings and populations. The research predominately took place in the USA (n = 9), with only a few studies conducted in other countries (n = 5), further constraining the applicability of findings across diverse educational and cultural contexts. Additionally, a significant proportion of the studies lacked long-term follow-up, making it difficult to assess the sustained effects of yoga interventions on children's wellbeing. The studies employed a wide range of assessment tools and outcome measures, making it challenging to synthesise findings across different interventions and evaluate their collective effectiveness. The review only included publications written in English, potentially overlooking valuable research findings from studies published in other languages. Lastly, the scoping review was restricted to peer-reviewed literature, excluding non-peer-reviewed sources that might offer additional insights into the implementation and impact of yoga in schools.

To contextualise these findings, Tables 2.6 and 2.7 summarise six major reviews and meta-analyses on school-based yoga interventions, outlining their populations, outcomes, limitations, and recommendations. The six reviews and meta-analyses examined reveal a cautiously optimistic picture of yoga's potential benefits in school settings, particularly for enhancing self-regulation, psychological wellbeing, and executive functioning. While positive effects are frequently reported, especially in relation to attention, mood, and emotional awareness, findings are often inconsistent, and methodological limitations remain prevalent. These include small sample sizes, limited use of control groups, overreliance on self-reports, and lack of standardisation in research design. More recent reviews stress the need for better outcome measurement, theory driven frameworks, and clearer documentation of yoga practices, particularly when working with younger children. Despite these issues, the reviews agree that yoga may serve as a promising tool for supporting SEL in early education, provided future studies address current issues with rigour, scalability, and developmental appropriateness.

Table 2:6: Summary of systematic reviews and meta-analyses (2012-2016) evaluating school-based yoga interventions: General outcomes and methodological limitations

Author(s) & Year	Type of Review	Target Populations	Key Findings / Reported Benefits	Methodological Limitations	Recommendations for Future Research
Serwacki & Cook-Cottone (2012)	Systematic review (12 studies)	Typically developing children; children with autism, learning disabilities, emotional/behavioural difficulties	Improved self-concept, emotional balance, reduced anxiety and negative behaviours; enhanced attention and IQ in children with SEN	Small samples, lack of randomisation, varied interventions, limited detail, weak statistical analyses	More RCTs; standardised components; clearer reporting of dosage, fidelity, mechanisms of change
Ferreira-Vorkapic et al. (2015)	Systematic review of RCTs (9 studies)	School-aged children (general); cognitive and psychological outcome focus	Some evidence of improved mood, anxiety, memory, self-esteem, and attentional control; benefits inconsistent across studies	Small samples, variability in yoga styles and duration, inappropriate psychometric tools, failure to assess key variables like mindfulness/body awareness	Greater standardisation; age-appropriate interventions; better measurement of mindfulness-related variables
Khalsa & Butzer (2016)	Systematic review (47 studies)	Children and adolescents in school settings (mostly elementary)	Suggested improvements in mental health, behaviour, and academic performance; mixed and often statistically weak results	Small samples, self-reported outcomes, lack of controls, weak statistical significance, inconsistent fidelity, limited long-term follow-up	High-quality RCTs; better assessment of dosage, fidelity, long-term outcomes; inclusion of objective measures; investigation of mechanisms of change

Table 2:7: Summary of recent systematic reviews and meta-analyses (2020-2024) on school-based yoga: General outcomes and methodological limitations.

Author(s) & Year	Type of Review	Target Populations	Key Findings / Reported Benefits	Methodological Limitations	Recommendations for Future Research
Miller et al. (2020)	Systematic review of RCTs (39 studies)	Youth aged 5–18, mostly in school settings; ethnically diverse	Positive effects in ~90% of studies across psychological, cognitive, and physical domains; promising but outcome heterogeneity limits firm conclusions.	Few studies assessed same outcomes; inadequate blinding, attrition reporting; weak active controls; heterogeneity in measures and outcomes.	Use theory-based logic models; test mediators/moderators; ensure fidelity; increase use of validated measures; explore clinical populations; report null/negative findings.
Martin et al. (2024)	PRISMA Scoping Review (14 studies)	Children aged 3–10 in preschool and primary school settings	Positive impacts on self-regulation, psychological wellbeing, cognitive function, emotional awareness; yoga fostered growth mindset and embodied learning	Variation in intervention types, duration, and undocumented poses; small sample; no appraisal of study quality per scoping protocol	Longer-term studies; use of developmental assessments; exploration of how embodied experiences promote SEL and emotional skills
Wilkin et al. (2024)	Meta-analysis (7 studies)	Children aged 3–7; school-based settings; 1080 participants	Small but significant improvements in executive functioning overall, especially working memory and inhibitory control; potential role of yoga’s physical, breathing, and meditative components	Only 7 studies; variable outcome reporting; inconsistent intervention detail; lack of standardisation; no studies low risk of bias	More high-quality studies; standardised EF assessments; clearer intervention reporting (e.g., CLARIFY); test in-house vs external instruction; explore generalisability of EF gains

2.6.1 Key research gaps in SEL and yoga interventions

Despite the growing body of research on the benefits of SEL and yoga interventions in education, several significant research gaps and limitations remain. One gap is the lack of studies specifically focusing on NI, where the unique socio-political and educational landscape may influence the effectiveness and feasibility of such interventions. The impact of yoga in NI primary schools remains largely unexplored, necessitating further investigation into how cultural, religious, and policy-related factors affect its implementation.

Additionally, there is a scarcity of longitudinal studies examining the long-term effects of school-based yoga interventions. While existing research highlights short-term benefits such as improved emotional regulation and reduced stress, there is limited evidence on how these effects persist over time and influence long-term mental health outcomes. Another limitation is the variability in programme implementation, including differences in yoga styles, instructor training, duration, and frequency of sessions. This inconsistency makes it difficult to compare results across studies and establish a standardised framework for integrating yoga into school curricula. Moreover, most existing research has been conducted in the USA and India, with relatively fewer studies from Europe and the UK. Given the cultural and educational differences between these regions, further research is needed to understand how yoga interventions can be culturally adapted for primary schools in NI.

Finally, there is a lack of research on teacher and parent perspectives regarding school-based yoga, as well as the potential barriers to implementation, such as curriculum constraints, religious sensitivities, and resource availability. Addressing these gaps is crucial for developing evidence-based, culturally sensitive, and sustainable models for integrating yoga into primary education in NI. Future studies might usefully explore how yoga is already being used across schools and whether common practices or lessons can inform feasible, context-specific implementation strategies.

2.7 Conclusion

The literature reviewed above points to both the promise and complexity of integrating yoga within school-based SEL frameworks. Collectively, the studies suggest that yoga

interventions may support physical fitness, emotional regulation, mindfulness, and overall wellbeing among children. When situated within theoretical frameworks such as Bronfenbrenner's EST, these interventions can be better understood in terms of how individual, familial, and broader societal factors interact to shape their effectiveness.

While these findings are encouraging, existing studies also reflect a range of methodological approaches and contextual variations that make it difficult to draw definitive conclusions across settings. Rather than viewing this as a limitation, it highlights the need for continued exploration into how yoga might be meaningfully adapted to local contexts. In particular, few studies have examined how yoga might be implemented in NI, where socio-political and educational structures present unique opportunities and challenges.

Rather than addressing broader methodological gaps, this study focuses on stakeholder perspectives and the feasibility of yoga in the NI primary school context. The insights gained here lay the groundwork for the next stage of this research, which will explore empirical methods and practical applications in primary school settings.

Chapter 3: Methodology

3.1 Introduction

This chapter outlines the methodological framework employed to address the study's research questions. It begins with a brief reflexive biography, identifying personal and professional influences on the research design. The study's ontological and epistemological foundations are then discussed, aligned with a critical realist paradigm and a social constructionist perspective. Bronfenbrenner's Ecological Systems Theory (EST) serves as the guiding framework, for data collection and analysis. The rationale for a sequential mixed methods design is outlined, followed by detailed descriptions of the Phase One (scoping questionnaire) and Phase Two (case study) methods, including data collection instruments, procedures, and ethical considerations.

3.1.1 The research questions

The thesis investigates the potential of yoga to enhance the social and emotional wellbeing of primary school children in NI through four main research questions:

1. How is yoga currently being used in primary schools in NI?
2. What are the perspectives of key stakeholders, including principals, teachers, pupils, and parents, on the current and potential future use of yoga in Primary schools?
3. Can yoga be effectively integrated within the curriculum in schools in NI?
4. What would a testable model (and theory of change) for the implementation of a yoga intervention in NI schools look like?

3.1.2 Reflexive positioning: Biography, perspective, and theoretical orientation

Reflexivity acknowledges that the researcher bring their own history, values, and assumptions to the research process, shaping how knowledge is formed and interpreted (Braun and Clarke 2020; Olmos-Vega et al. 2023). As Braun and Clarke (2013, p. 36) observe, researchers carry their *“own histories, values, assumptions, perspectives, politics, and mannerisms into their research.”* My personal and professional experiences have played a formative role in shaping the research questions, methods, and theoretical frameworks underpinning this study.

I identify as a working class, white male, married, and a father to an eleven-year-old son. Parenting a primary school child has heightened my awareness of the emotional and academic pressures faced by children, as well as the practical challenges of implementing school-based interventions. I was raised in a small urban town in NI, categorised as an area of social deprivation. My education occurred within a religiously segregated system, and as a Protestant, my school environment was culturally homogenous. At twelve, my parents separated, an event that significantly affected my emotional wellbeing and academic engagement. I left school at sixteen with limited qualifications and worked in a local factory for ten years before transitioning into the health and fitness sector through martial arts and yoga, which marked a major turning point in my life.

The career change opened pathways to vocational and academic qualifications. After completing several vocational courses, I enrolled in an Access to University course in 1996, graduating with an undergraduate degree in 2002. I then pursued a teaching career in Further Education, completing a Postgraduate Certificate in Further and Higher Education (PGCFHE), followed by a Master's in Education (MEd). The latter was completed in 2011, during a period of profound personal loss, the death of our infant son Rudy in 2009. This deeply shaped my understanding of emotional distress, resilience, and the need for supportive environments for children and families.

These experiences solidified my commitment to inclusive, accessible education, and the transformative potential of second-chance learning. Transformation is central to Mezirow's (1997) theory of critical reflection, which emphasises how personal experiences reshape worldviews. My teaching in Further Education reinforced the need for educational environments that address learners' social realities and structural barriers (Christie et al. 2015; DENI 2023b).

Yoga has remained central to my personal and professional life, providing a means to integrate physical, emotional, and psychological wellbeing (Streeter et al. 2012; Stirling 2016). My engagement deepened through formal training and teaching, including in teacher education. This integration of postures (asanas), breathwork (pranayama), and meditative focus informed my understanding of health as a multidimensional, socially situated experience (Desikachar 1999; Coulter 2004; Chauhan and Saxena 2024). Participant

narratives in my work as a yoga teacher and trainer, further supported this view, frequently highlighting enhanced emotional awareness, resilience, and stress reduction.

These biographical experiences contributed to my adoption of Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner 1979) as a guiding framework. Reflecting on the dynamic interaction between individual and environment helped me understand how development is shaped by multiple, interacting systems, individual, community, and societal. This aligns with social constructionism, which holds that knowledge and meaning are co-constructed through lived experience and interaction (Berger and Luckmann 1967). Mireanu (2021) similarly describes identity and experience as evolving through reinterpretation over time.

The topic and approach of this doctoral thesis are rooted in these interwoven personal and professional experiences. They shape a subjective worldview, culturally derived and historically situated, that informs every aspect of the research design and analysis.

3.2 Philosophical positioning and case study design

This study adopts a critical realist paradigm, combining a realist ontology with a critical, interpretivist epistemology. Critical realism posits that an objective reality exists independently of human perception, but our understanding of it is shaped by our social, cultural, and historical contexts (Bhaskar 2013; Fletcher 2017). While constructs such as wellbeing or educational engagement may reflect underlying mechanisms, they are interpreted through lived experience. This makes critical realism compatible with a moderate form of social constructionism, which explores how knowledge is contextually and socially constructed (Elder-Vass 2012).

This philosophical stance informed the use of case study methodology, which enables detailed exploration of complex phenomena in real-world settings (Yin 2018). Case studies are particularly suited to critical realist research as they allow for the identification of causal mechanisms within specific contexts (Easton 2010), while accommodating an interpretivist focus on participants' meaning making (Baxter and Jack 2015; Yin 2018). This aligns with the study's aim to explore how yoga is implemented and experienced in NI primary schools. The use of qualitative methods, individual and group interviews with pupils and staff, reflects a commitment to understanding perspectives while accounting for broader structures

influences. Critical realism thus provides a strong foundation for integrating subjective experiences with the social conditions that shape them. It enables a dual focus on meaning and mechanism, supporting both the theoretical and methodological aims of the study.

Bronfenbrenner's EST, which serves as the guiding theoretical framework. EST emphasises dynamic interaction between individuals and their environments, recognising that development is shaped by interrelated systems from the microsystem (e.g., classroom) to the macrosystem (e.g., education policy). Its use complements a critical realist position, offering a structured lens to examine experiences and mechanisms across multiple levels of context. EST was integrated throughout the research, from design to data collection and analysis, to support a nuanced understanding of school-based yoga as a socially embedded practice.

3.2.1 Theoretical framework

EST informed both the theoretical orientation and research design. While researchers are encouraged to apply theory through their own lens, Kivunja (2018) cautions against premature attempts to generate theory. Established frameworks such as EST offer a robust foundation, widely used across fields including physical activity (King and Gonzalez 2018), STEM education (McClure et al. 2017), behavioural interventions in schools (Trach et al. (2018), and public health (CDC 2011).

Swanson and Chermack (2013) highlight that a coherent theoretical framework supports a study's stance and underpins the interpretation of data. It acts as both a blueprint (Grant and Osanloo 2014), and a '*theoretical coat hanger*' from which to analyse and discuss findings (Kivunja 2018). Sarter (2006) similarly stresses the importance of 'theory driven thinking', arguing that findings without theoretical grounding lack meaning.

Accordingly, EST shaped the development of data collection tools. For instance, interviews with school staff were informed by EST, with questions designed to target different ecological levels (Martinez et al. 2012). Examples are provided in Table 3.1. EST is particularly well suited to educational research, as it centres context in development and aligns with both critical realist and social constructionist perspectives (Hayes et al. 2017).

Table 3:1: Relationship of Social Ecological Theory to the interview questions

Interview Questions	Social-Ecological Model Level
How have you managed to fit yoga into the school curriculum?	A personal question based on an individual's perspective, though it relates to interpersonal, organisational and policy levels. (Micro, Meso, Exo, and Macrosystems)
What would your view be on yoga and religion?	Personal (Micro)
What would be your schools/colleagues' views be on yoga and religion?	Personal, interpersonal, and organisational (Micro, Meso, Exo, and Macrosystems)
How important is it to you to have the support/buy-in of other stakeholders, such as, the School Governors, Teachers, Classroom Assistants and Parents?	Personal, interpersonal, organisational, and community. Micro, Meso, Exo, and Macrosystems)
How important do you think it is for the children to take part in physical activity in the primary school setting?	Personal (Micro)
Do you know what the minimum recommended time for curricular PE per week is in NI primary schools?	Policy and organisational (Exo and Macro)

Figure 3.1 depicts the relationships between the research philosophy, theory, methodology, and methods. EST is particularly suited to educational research, as it emphasises the importance of context in development and aligns with both critical realist and social constructionist perspectives (Hayes et al. 2017).

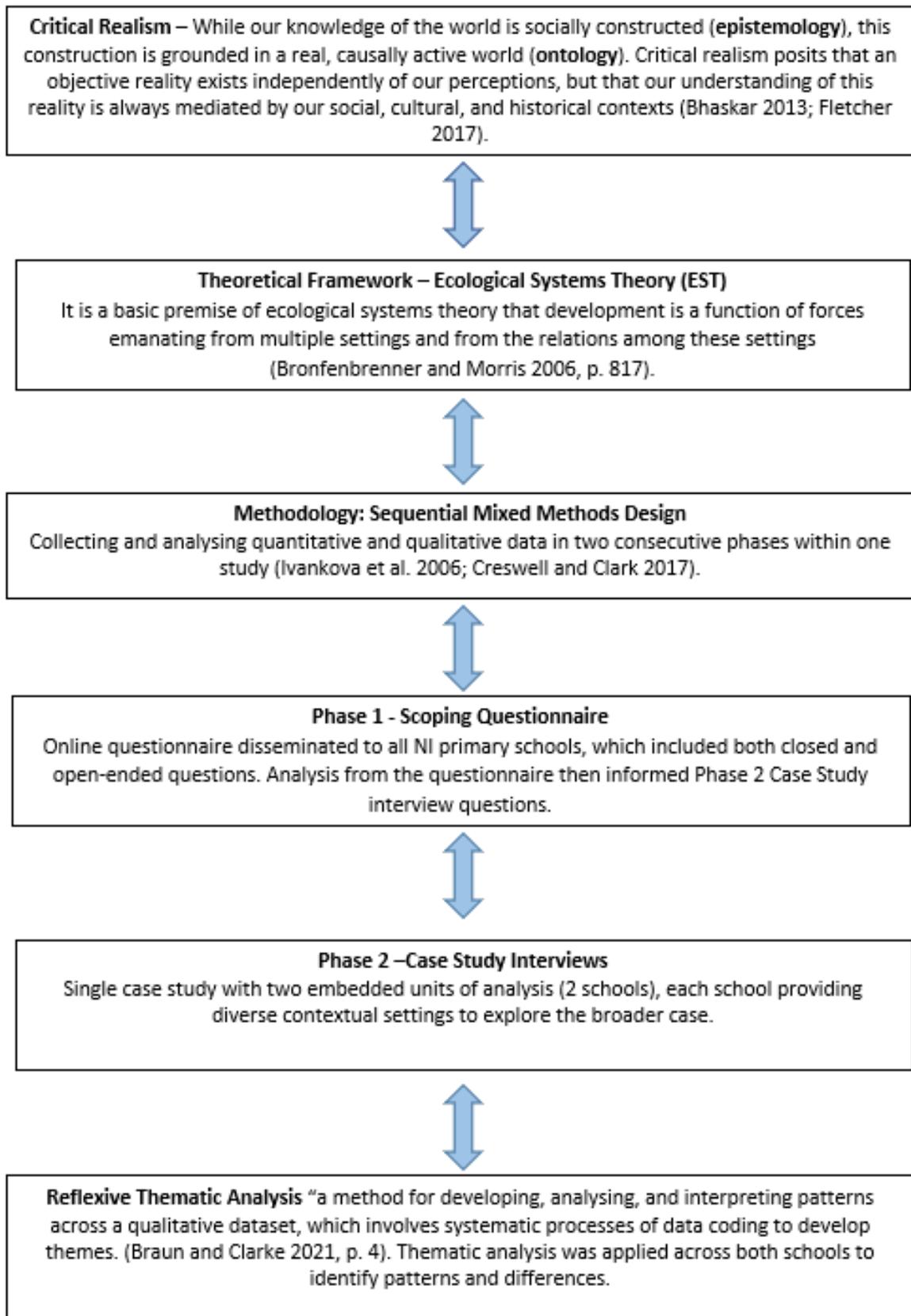


Figure 3.1: Philosophical foundations and methodological framework of the study

3.2.2 A sequential mixed methods approach

To address the research questions comprehensively, the study adopted a sequential mixed methods design, enabling integration of demographic, contextual, and experiential insights (Creswell and Clark 2017). The two phases, a scoping questionnaire (Phase One) and qualitative case study (Phase Two), combined the breadth of quantitative data with the depth of qualitative inquiry (Schoonenboom and Johnson 2017).

Quantitative methods, commonly employed in the natural sciences, are also common in social science research on yoga and mindfulness, typically through self-report measures (Butzer et al. 2017; Bazzano et al. 2018; Butzer and LoRusso 2021). While these instruments generate numerical data suitable for statistical analysis, they are designed to quantify subjective experiences such as emotional states, stress, or wellbeing, capturing these phenomena in a structured and standardised manner (DeVellis and Thorpe 2021; Streiner et al. 2024). Consequently, quantitative data are not inherently objective; rather, their strength lies in the systematic and replicable measurement of internal experiences. Although physiological measures may offer more directly observable indicators, they do not necessarily align with the aims or theoretical framing of all studies. Recognising these distinctions helps to avoid conflating objectivity with methodological rigour (Meier 2005; Braun and Clarke 2013).

Qualitative methods, by contrast, help uncover meaning making processes and lived experiences (Braun and Clarke 2013). In school-based yoga research, scholars have highlighted the underrepresentation of stakeholder voices, calling for more interpretive work (Bannirchelvam et al. 2017; Butzer et al. 2017). Rather than privileging one paradigm, over another, methodological complementarity has been advocated as a means of addressing the limitations inherent in a single methods design (Doyle et al. 2009; Bryman 2016). Mixed methods approaches harness the strengths of both traditions, offering data that are both broad in scope and rich in insight (Teddlie and Yu 2007).

In this study, Phase One used a scoping questionnaire distributed to all NI primary schools, collecting both closed and open-ended responses. This generated data on prevalence, institutional characteristics, and barriers to adoption. Findings then informed Phase Two, which used qualitative interviews with staff and pupils in two schools. This sequential design ensured that the qualitative phase was contextually grounded, enabling a nuanced

exploration of how yoga was perceived and implemented across different school environments.

3.3 Phase One methods: The scoping questionnaire

The first phase of the study involved an online scoping questionnaire (Appendix 2) designed to explore the existing and potential future use of yoga in NI primary schools. It also aimed to identify schools interested in participating in Phase Two (case study). Figure 3.2 illustrates the relationship between both phases.

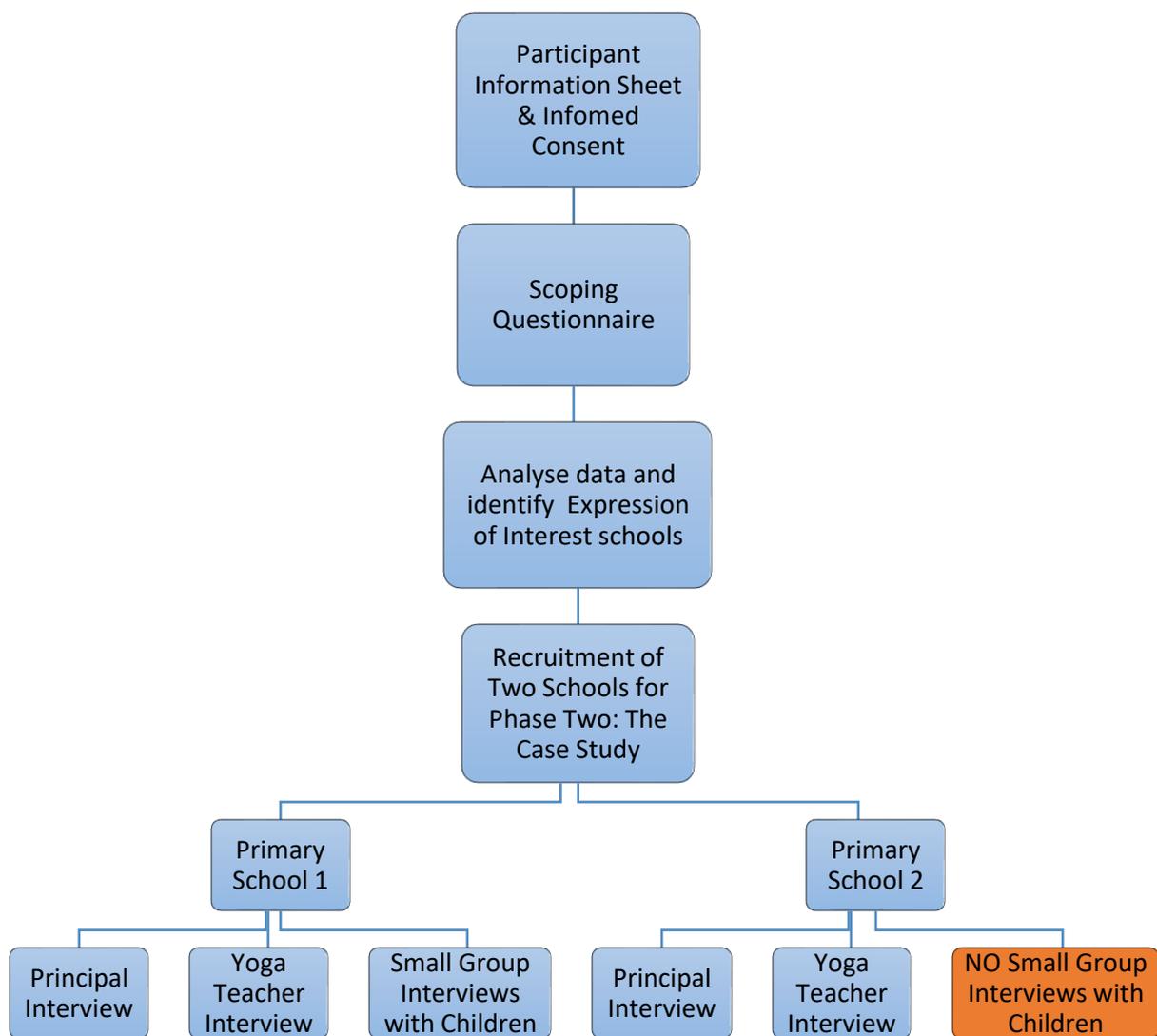


Figure 3.2: Phase One - Scoping questionnaire, leading to Phase Two - Case study

The questionnaire had four main objectives:

1. To gather data addressing the research questions.
2. To identify schools willing to participate in Phase Two case study.
3. To obtain demographic data from interested schools support purposive sampling.
4. To collect preliminary quantitative and qualitative data to inform Phase Two interview questions.

3.3.1 Data Collection Instrument

Questionnaires are widely used in educational research for capturing structured data suitable for analysis (Privitera and Ahlgrim-Delzell 2018). An online format was chosen for ease of access and efficiency, despite potential drawbacks such as lower response rates and incomplete or duplicate entries (Nayak and Narayan 2019). Nonetheless, they remain a practical and cost-effective tool with automated data collection (Regmi et al. 2016; Saleh and Bista 2017; Nayak and Narayan 2019).

As no existing questionnaire met the specific aims of this study, a bespoke instrument was created using Google Forms (Johnson 2021), offering seamless integration with Microsoft Excel (Hsu and Wang 2017). Validity was addressed by ensuring questions aligned with the research objectives (Privitera and Ahlgrim-Delzell 2018), and reliability was enhanced by avoiding leading language or complex phrasing (Cohen et al. 2011). Question development was informed by literature identifying barriers to school-based yoga, including time constraints, (Wang and Hagins 2016), lack of peer support (Chen and Pauwels 2014b; Wolff and Stapp 2019), and age-group suitability (Conboy et al. 2013). The final questionnaire included:

- A Participant Information Sheet
- A Consent Form
- A 21-item Scoping Questionnaire
- An Expression of Interest section for Phase Two.

Nineteen items directly addressed the research questions; the remaining two enabled identification of schools interested in case study participation.

3.3.2 Participant recruitment and data collection procedure

The sampling frame comprised all 784 NI primary schools listed by the Department of Education (DENI 2021d) for the 2021/22 academic year. The questionnaire was distributed via email to school principals, using generic contact addresses sourced from the DENI Institutional Search facility (DENI 2022), as individual emails were not publicly accessible (see Appendix 1 for introduction letter, participant information sheet, and consent form).

Each email included:

- A researcher introduction and university profile link for verification
- The study title
- A secure link to the questionnaire

The first distribution on 1st February 2022 yielded 39 responses (5% return). A second email sent on 24th February 2022, generated a further 57 responses, resulting in a total of 96 responses (12% return rate).

3.3.3 Ethical Issues, confidentiality, and anonymity

Favourable ethical opinion for Phase One was granted by Cardiff University School of Social Sciences Research Ethics Committee on 7th June 2021 (Ref: SREC/4197). Ethical safeguards were implemented to ensure the safety, confidentiality, and anonymity of participants.

Participants were informed that:

- Involvement was voluntary
- They could withdraw at any time without consequence
- All responses would remain confidential and anonymised, and all personal data processed in accordance with data protection legislation (Cardiff University Data Protection Policy & GDPR).

The assurance of confidentiality is a key factor to influencing response rates in online surveys (Saleh and Bista 2017). Accordingly, all relevant data were anonymised immediately after collection, with identifiers such as names, addresses, and email addresses removed, although the key variable of 'Controlled' or 'Maintained' primary school was retained. Data were securely stored on the university's One Drive for Business network which offers encrypted storage and two-factor identification (Queens University Belfast 2021).

Each participant received a Participant Information Sheet (PIS) outlining:

- What participation involved
- The opportunity to become a Case Study school
- Anticipated timelines for Phase Two
- The expression of interest process

The PIS and consent form ensured ethical integrity by enabling participants to make free and informed decisions. Researcher contact details were for questions or clarification.

3.4 Scoping questionnaire analysis

Following data collection, responses were collated and analysed to provide a descriptive overview of yoga provision in NI primary schools. Google Forms automatically generated a response spreadsheet, facilitating secure management and minimising transcription error.

The dataset was exported to Microsoft Excel for cleaning and analysis. Microsoft Excel was selected for its capacity to manage large datasets and support descriptive statistical analysis (Privitera and Ahlgrim-Delzell 2018). Descriptive techniques included measures of central tendency (mean) and variability (standard deviation), as well as frequency distributions and percentages to explore school characteristics and compare management types. Open-ended responses were reviewed and thematically grouped to identify patterns and recurring

topics. This enabled the presentation of both quantitative and qualitative data in a structured format. Summary tables were developed to illustrate key findings and support comparisons across school types, facilitating interpretation of both numerical and textual data.

This analysis provided the foundation for Chapter 4, offering insights into the current status of yoga provision, barriers to implementation, interest in future delivery, and trends in delivery practices.

3.4.1 Using the scoping questionnaire to inform case study design

The questionnaire served a dual purpose; to describe current provision and to inform Phase Two design. Specifically, it supported purposive recruitment of two schools based on contextual variation in size, management type, and socioeconomic status. Findings, particularly from open-ended responses, highlighted themes such as logistical barriers, resource constraints, and cultural or religious sensitivities. These areas were carried forward into the development of interview schedules for Phase Two. For example, survey responses mentioning parental objections informed the inclusion of interview questions on religion and cultural acceptance. A prompt sheet (Appendix 3) incorporating anonymised survey excerpts was also used to support deeper discussion during interviews. This ensured interviews captured both structural and cultural dimensions of implementation.

This alignment across phases enhanced methodological coherence and ensured that the qualitative case study was grounded in the realities identified through the initial scoping phase. A full presentation of the questionnaire findings is provided in Chapter 4.

3.5 Phase Two methods: Introduction

This section outlines the methodological framework for Phase Two, shaped by the findings from Phase One. Figure 3.2 illustrates the connection between the scoping questionnaire, the case study design, and the findings in Chapter 5.

The section begins by justifying the use of case study methodology within a critical realist paradigm, followed by an explanation of its theoretical foundations. It then details the

sampling and recruitment of two schools, including selection criteria. The rationale for using individual interviews with adults and small group interviews with children is discussed, along with ethical considerations such as consent, safeguarding, and confidentiality. The section concludes with the interview procedures and an overview of the analytical approach, Reflexive Thematic Analysis.

3.5.1 Case study theory

The case study method was selected to explore the implementation of school-based yoga within its real-life educational context. It enables in-depth analysis of complex phenomena where boundaries between the setting and the issue are blurred (Yin 2018). Widely used in educational research, case studies offer a naturalistic approach to investigating situated practices (Harrison et al. 2017). Smith (1978) describes the case study as an investigation of a bounded system, while Yin (2018) sees it as an empirical inquiry into contemporary issues within real-world settings.

Despite critiques around rigour and subjectivity (Remenyi et al. 1998; Braun and Clarke 2013), others defend its validity. Crabtree (1999) notes that interpretivist researchers accept subjectivity but still pursue rigour. Rather than embracing full relativism, they adopt a pluralistic stance, recognising the dynamic interplay between subject and object. A key strength of case study methodology is its flexibility. It is not tied to a single paradigm and can accommodate diverse ontological and epistemological positions, from realism to relativism (Rosenberg and Yates 2007; Harrison et al. 2017). Some situate case studies with critical realism (Järvensivu and Törnroos 2010), while others like Yin (2018), who is often viewed as adopting a more positivist-leaning critical realism, illustrate the variability within this field (Yazan 2015)

Other scholars position case study research firmly within the social constructionist paradigm. Baxter and Jack (2008) argue that social constructionism, which holds that multiple realities are co-created within communities and cultures, aligns closely with case study methodology. Merriam (1998) similarly views case study research as compatible with a constructionist epistemology, which views reality as constructed through individuals' interactions with their social worlds. Although strong forms of social constructionism and

critical realism are sometimes seen as incompatible, Elder-Vass (2012) maintains that moderate constructionism, focused on the social construction of knowledge, not reality, can be reconciled with critical realism.

In this study, these complementary perspectives are used in tandem. Critical realism frames the investigation of structural and contextual influences, while moderate social constructionism enables the exploration of participants' lived experiences (Hall 2013; Fletcher 2017). This dual perspective informs the methodological choice of qualitative interviews, consistent with an interpretivist approach that values subjective meaning (Heath et al. 2009; Butzer et al. 2017). Lawani (2021) further endorses this integration, describing critical realism as an inclusive philosophy suited to mixed methods research that bridges positivist and constructionist traditions.

3.5.1.1 Application of the case study

Phase Two adopted a single case study design, with school-based yoga in NI defined as the central phenomenon. Two primary schools were selected as embedded units of analysis allowing for contextual variation while maintaining a unified analytic focus (Yin 2018). While Phase One provided descriptive data, interviews were used in Phase Two to explore experiences depth. Interviews are well suited to case study research due to their capacity to elicit rich, contextualised data (Gray 2021). Multiple methods were used, including demographic data and qualitative interviews, to develop a comprehensive picture of the case (Baxter and Jack 2008). Merriam (1998) describes the qualitative case study as an intensive analysis of a clearly defined entity, such as an individual, programme, institution, or social group. In this study, the case comprised pupils, principals, and internal yoga teachers, all situated within their school contexts.

Treating the schools as embedded subunits allowed for comparison across settings without fragmenting the analysis. This design supported the identification of multilevel factors influencing yoga implementation, consistent with a critical realist emphasis on structural and contextual mechanisms.

3.5.2 Data collection method: Interviews

This section outlines the use of interviews to explore stakeholder perspectives in the two case study schools. It begins by justifying the method, describing the use of one-to-one interviews with adults and small group interviews with children. The rationale for each format is discussed, along with key ethical and methodological considerations. Interview development is reviewed, highlighting how it was informed by theory, prior research, and Phase One findings.

3.5.2.1 Interviews and their suitability for data collection

Focus groups, interviews, observations, and open-ended questions in questionnaires, are all suitable methods for attaining rich, detailed accounts (Flick 2014), and are often combined in qualitative case studies (Dooley 2002). Among these, interviews are one of the most dominant methods for qualitative data collection (Edwards and Holland 2013; Stake 2013; Harrison et al. 2017).

While structured qualitative questionnaires offer time efficiency and reduce interviewer bias (Bryman 2016), they limit flexibility. Unlike interviews, questionnaires cannot accommodate clarification, probing, or tonal nuance, and lengthy forms tend to deter completion (Gray 2021). Yin (2018) acknowledges the value of questionnaires but emphasises interviews as essential for capturing participants' subjective perspectives in case studies.

Given the study's aim to understand stakeholder experiences, one-to-one interviews were used with adult participants (principals, yoga teacher/primary school teacher, and yoga instructor/classroom assistant). This format allowed in-depth exploration of personal and professional perspectives (DeJonckheere and Vaughn 2019). Interview questions were informed by the study's theoretical framework (Section 3.2.1), research questions (3.1.1), Phase One results, and relevant literature (Case-Smith et al. 2010; Conboy et al. 2013; Butzer et al. 2016; Wang and Hagins 2016). Adult interviews were structured around four themes:

1. Experience-narrative of teaching (Primary and yoga)
2. Personal perspectives on yoga in schools

3. Curriculum integration
4. Visions for the future of yoga in primary schools

Semi-structured interviews were employed. Core questions were asked in the same order, with open and closed items supported by probes to elicit elaboration and clarification (Kallio et al. 2016; Robinson 2023). This allowed flexibility while maintaining consistency across interviews. Semi-structured interviews are particularly valuable in mixed methods designs, enabling exploration of themes identified during earlier quantitative phases (DeJonckheere and Vaughn 2019).

Tailored interview guides were developed for each participant group; principals, teacher/yoga teacher, classroom assistant/yoga teacher (Appendices 9-11) and a guide for the three pupil group interviews (Appendix 4).

3.5.2.2 Children and small group interviews

Children participated in semi-structured small group interviews, using consistent questions and probing techniques. One-to-one interviews were avoided due to the potential for stress and discomfort (Roberts-Holmes 2018), with small groups offering a more relaxed and empowering alternative (Clark et al. 2014). Small group interviews are widely regarded as child friendly and effective for amplifying children's voices in research (Freeman and Mathison 2009). Historically, children's perspectives have been underrepresented (Porcellato et al. 2002) but legislative changes (Unicef 1989) and evolving research ethics have emphasised child participation through accessible, inclusive methods.

The interviews enabled children to express their thoughts and feelings about yoga, aligned with child-led research principles, such as the "*no decision about me without me*" ethos (Demkowicz et al. 2020, p. 2). Children are often best positioned to speak about their own experiences (Cohen et al. 2011), and group interviews promote interaction and reduce the intimidation often felt in one-to-one formats (Greig et al. 2012). Group composition was carefully considered. Recognising that classroom tensions (e.g., conflict, bullying) can affect participation (Michelle et al. 2013), friendship groups were used to enhance comfort and openness. Literature suggests optimal sizes of five to eight children with Greig et al. (2012) advising an optimal size of five or six. Similarly, Cohen et al. (2011) recommend including six

to seven children, cautioning that too large a group can lead to loss of focus, whereas, too small a group may increase pressure on individual participants. Roberts-Holmes (2018) advocates for three or four friends per group, arguing that this mirrors children's natural sociability and allows for greater relaxation and more spontaneous conversation.

Friendship groups created supportive, familiar dynamics and encouraged idea sharing, reflecting the social nature of learning (Heath et al. 2009; Michelle et al. 2013). This method also aligned with the study's constructionist orientation, where knowledge is co-constructed through dialogue. In this context, both researcher and participants take an active role in the construction of knowledge, with each participant's individual perspectives contributing to the collective understanding (Adler et al. 2019).

3.5.3 Sampling

3.5.3.1 Identifying measures of socio-economic status for sampling

The literature review highlighted the influence of SES on education, health and social and emotional wellbeing (NICCY 2021). Accurate SES measures are essential for addressing educational inequalities and targeting support for vulnerable children (Ilie et al. 2017). In this study, SES was assessed using Free School Meal Entitlement (FSME) data from the Department of Education (DENI 2021c), a widely accepted proxy for deprivation due to its correlation with other deprivation indicators, such as parental occupation and education (Ilie et al. 2017; Northern Ireland Statistics and Research Agency 2017).

Children eligible for FSME show markedly lower educational outcomes, with a 25-point attainment gap compared to their peers (Joseph Rowntree Foundation 2022). This gap widens over time, and FSME pupils are twice as likely to leave school without GCSEs (Carville 2024). Eligibility is based on household income or receipt of benefits (Croxford 2010), but several limitations have been identified.

FSME reflects registration rather than need, as some eligible families do not apply due to stigma or dietary concerns (Croxford 2010; Perry 2010). Using the Millennium Cohort Study data, Taylor (2017) found that 8% of children living in long-term poverty were not FSME eligible. Families just above the threshold are similarly disadvantaged but ineligible (Perry 2010). FSME also fluctuates with the economic cycles; eligibility can change annually despite

stable family circumstances (Ilie et al. 2017). Kounali (2006) found only one third of the pupils were consistently eligible, over four years. However, FSME is more stable over time.

Combining FSME with other indicators improves reliability. Chowdry et al. (2013) used neighbourhood-level deprivation data, while Strand (2014) recommended combining FSME with the Income Disadvantage Affecting Children Index (IDAC). Styles (2008) also advocates the use of census to provide a fuller socioeconomic profile. In NI, the Multiple Deprivation Measure (NIMDM) assesses deprivation across seven domains including income, health, education and crime (Northern Ireland Statistics and Research Agency 2017,2023). This study therefore adopted a multi-dimensional approach, using FSME to capture material deprivation and NIMDM to reflect broader socio-economic disadvantage.

3.5.3.2 Sampling of schools

Non-probability sampling methods are widely used in education research, Convenience sampling allows researchers to select participants based on accessibility, availability, or relevance (Adler et al. 2019), particularly useful in schools, youth groups, or community settings. Purposive sampling, commonly used in case study research, involves selecting individuals or settings expected to yield rich, relevant data (Gray 2021). It is particularly useful when participants are chosen because they share specific characteristics or demographics (Etikan et al. 2016)

This study adopted a combined strategy. Schools were first identified through convenience sampling from those that expressed interest in Phase One and were available to participate. From this pool, purposive sampling was employed to ensure variation across key contextual factors, including rural versus urban, SES (using FSME and NIMDM), and school management type, the latter having religious connotations. Two schools with contrasting management types were selected to support cross-contextual analysis.

3.5.4 Recruitment of schools

Two case study schools, one Controlled and one Maintained, were purposively selected from the expressions of interest received through the scoping questionnaire (SREC/4197).

The aim was not representativeness but contextual variation in school size, SES, and religious affiliation. If a selected school declined participation, another matching school would be invited.

From the ninety-six questionnaire responses, nine schools expressed interest in Phase Two. After excluding one incomplete response, the pool included six Controlled and two Maintained schools, with five urban and three rural settings. Table 3.2 presents an overview of these schools using unique reference numbers (URNs), showing location, management type, FSME status, and NIMDM ranking.

Initial invitations were sent to YPS1cs1 (Urban, Controlled, FSME above average) and YPS22ex (Rural, Maintained, FSME above average). While YPS1cs1 confirmed participation, YPS22ex withdrew due to complications arising from COVID-19. The only other Maintained school, YPS9ex also withdrew due to COVID-19-related constraints. Following further contact with remaining schools, YPS2cs2 (rural, Controlled) was successfully recruited. Although recruitment was initially challenging, two case study schools were ultimately secured.

Table 3:2: Schools that expressed an interest in participating in Phase Two

Unique Reference Number	Urban/Rural	Management Type	% Pupils Entitled to FSME – Above/Below National Average (28.2%)	NI Multiple Deprivation Measure (Ranked closer to Most deprived/Least deprived)
YPS1cs1	Urban	Controlled	Above	Most deprived
YPS2cs2	Rural	Controlled	Below	Least deprived
YPS5ex	Urban	Controlled	Below	Least deprived
YPS9ex	Rural	Maintained	Below	Least deprived
YPS15ex	Urban	Controlled	Above	Most deprived
YPS22ex	Rural	Maintained	Above	Least deprived
YPS23ex	Urban	Controlled	Below	Least deprived
YPS24ex	Urban	Controlled	Below	Least deprived

3.5.4.1 Recruitment of adult participants

Adult recruitment began with an information session at each case study school, delivered by the researcher during scheduled staff meetings. The session introduced the study's aims,

research questions, and methods, along with ethical considerations, including voluntary participation, confidentiality, and procedures for raising concerns.

To ensure informed consent, recruitment materials were distributed at least seven days in advance of the session. These included a participant information sheet (Appendices 18 and 19), and consent form (Appendices 7 and 8), all informed by Cardiff University templates and provided in both hard copy and digital format. Staff could consent electronically (via Google Forms) or return a signed paper copy. Those undecided at the session were given an additional week to respond, with the researcher available by email to answer queries. This process ensured transparency, upheld participant autonomy, and adhered to ethical standards for school-based research.

3.5.4.2 Recruitment of child participants

Child recruitment began once the participating yoga classes had been identified. Up to two classes per school were targeted, depending on (a) the number of classes receiving yoga, (b) class size, and (c) parental consent rates. Each school distributed a participant information sheet (Appendix 20), and opt-in consent form (Appendix 21) to parents/guardians of eligible pupils. Parents who wished their child to participate returned the signed form to school, which retained it as a record of informed consent.

Following this, the researcher collaborated with classroom teachers to provide an age-appropriate explanation of the study (Appendix 22). Teachers read aloud a child friendly information sheet aligned with the reading level of the youngest pupil. To further support understanding, a 'question drop box' was placed in each classroom, allowing children to submit anonymous queries. The researcher later returned to answer these questions directly.

Children who wished to participate in small group interviews signed a child assent form, which reiterated voluntary participation and the right to withdraw without explanation. Signed assent forms were countersigned by the researcher, and a copy was offered to each participating child.

3.5.5 Ethical issues

Ethical approval for Phase Two of the study was granted on 15th March 2022 by the Cardiff University School of Social Sciences Research Ethics Committee (SREC/48). This section outlines how ethical considerations, including access, voluntary participation, consent, safeguarding, confidentiality, and anonymity, were addressed during recruitment and data collection, particularly involving children.

3.5.5.1 Access, consent, and assent

Access to schools was granted by principals, acting as institutional gatekeepers. Adult participants were recruited following staff information sessions held during a scheduled staff meeting in each school. Prior to these sessions, staff received a cover letter, participant information sheet, and consent form, based on Cardiff University templates. Voluntary participation was emphasised, with at least seven days provided for returning consent forms. The researcher remained available by email for questions.

Child recruitment commenced once participating classes were identified. Parents received an opt-in consent pack (a participant information sheet, and consent form), distributed by schools. Only children with returned, signed parental consent forms were eligible. Teachers delivered a child-friendly explanation of the study, supported by a tailored Participant Information Sheet aligned with the reading level of the youngest pupils. A 'question drop box' was placed in classrooms, enabling children to anonymously raise concerns, which the researcher later addressed in person.

Children who choose to participate signed a Child Assent Form (Appendix 23), confirming they understood the voluntary nature of the study and their right to withdraw without consequence. This two-stage process, parental consent followed by child assent, aligns with ethical standards for research minors (Freeman and Mathison 2009; Bell and Waters 2018). The opt-in model was chosen over opt-out alternatives to ensure informed participation, consistent with the *Declaration of Helsinki* (Greig et al. 2012). While some scholars argue that opt-in methods may exclude vulnerable groups (de Man et al. 2023; Askari et al. 2024),

the low risk nature of this school-based study and the emphasis on transparency justified its use.

3.5.5.2 Emphasis on voluntary participation

Voluntariness was central for both adults and children. Information sheets clearly stated that participation was optional and withdraw could occur at any time without reason or consequence. This was reiterated verbally during adult sessions and children's group briefings. Staff information sessions were held without school management present to reduce perceived pressure to participate.

Participants were encouraged to ask questions and were provided with the researcher's contact details. Withdrawal was permitted up until the end point of transcription, and this right was reinforced throughout the process.

3.5.5.3 Safeguarding

Procedures adhered to Cardiff University's Safeguarding Policy (2021b) and Code of Practice for Working with Children and 'Vulnerable Adults' (2021a). The researcher held an enhanced DBS/Access NI certificate and had completed relevant safeguarding training.

Safeguarding measures included use of age-appropriate interview questions, advance coordination with school Designated Safeguarding Officers (DSOs), and adherence to school-specific safeguarding practices. At each visit, DSO details were confirmed, and interview settings were assessed for visibility and supervision. The researcher wore university ID at all times, and while occasional disruption occurred, interviews were conducted in safe, appropriately monitored environments.

3.5.5.4 Confidentiality and anonymity

Confidentiality (data handling) and anonymity (protection of identities) were maintained throughout the research (Sim and Waterfield 2019). Participants were assigned URNs at transcription. Child interviews were conducted in friendship groups to encourage openness, and approach supported by Roberts-Holmes (2018). Although group interviews may limit

confidentiality among peers, this was mitigated by establishing clear ground rules and reminding children not to share discussions outside the group (Porcellato et al. 2002; Moore 2015).

Audio files were stored on encrypted, password-protected devices and transferred to the university’s secure OneDrive for Business platform. No identifying information was included in transcripts, and data management complied with institutional and legal data protection standards.

3.5.6 Data collection procedures

Phase Two comprised a series of one-to-one interviews with adult participants and small group interviews with Year 7 pupils. Table 3.3 presents these interviews in chronological order, including, format, duration, and completion date.

Table 3.3: Adult and child interviews in chronological order

Primary School and Interviewees	Interview Format	Length of Interview (minutes)	Date Completed
PS1 Group 1 – Five Year 7 children	Small group interview	0:31:59	17/06/2022
PS1 Group 2 – Six Year 7 children	Small group interview	0:17:38	17/06/2022
PS1 Group 3 – Three Year 7 children	Small group interview	0:22:28	17/06/2022
PS1 Teacher/Yoga Teacher	One-to-one online interview via Zoom	0:35:55	22/06/2022
PS2 Principal	Face-to-face interview	0:26:13	29/06/2022
PS1 Principal	Face-to-face interview	0:37:15	06/07/2022
PS2 Classroom Assistant/Yoga Teacher	Face-to-face interview	0:39:14	08/07/2022

3.5.6.1 Small group interview setting and COVID-19 disruptions

Interview settings for children were chosen to minimise associations with formal school activities and to promote comfort, familiarity, and safety (Frosh et al. 2001). Ideal settings put children at ease, balance privacy with visibility, ensuring child safety, access to bathroom facilities, and familiarity (McCrum and Hughes 1998; Adler et al. 2019). A smaller,

familiar classroom was initially scheduled, offering privacy, proximity to bathrooms, and teacher visibility without audio oversight.

However, interviews took place in June and July 2022, amid ongoing post- COVID-19 disruptions. Although restrictions had eased by February 2022, an outbreak at PS1 necessitated the rescheduling of the pupil interviews. On the revised date, staff shortages and room reallocations led to the use of the staffroom. While the presence of adults supported safeguarding, the setting was less conducive to relaxed conversation. Several interruptions reduced the openness of some responses, although all interviews were completed without major disruption.

A timeline of COVID-19 developments and their impact on this study is provided in Appendix 5, contextualising these logistical challenges.

3.5.6.2 Small group interview procedure

Interview questions were informed by the study's research questions, scoping questionnaire results, and relevant literature (McCrum and Hughes 1998; Case-Smith et al. 2010; Conboy et al. 2013; Butzer et al. 2016; Wang and Hagins 2016; Adler et al. 2019). The small group interviews followed a semi-structured format, organised into four thematic sections:

- A. Experience-narrative of yoga classes
- B. Yoga's role in mood, stress, and self-regulation
- C. Yoga and health behaviours
- D. Application of yoga in other areas of life.

Questions were designed to be age-appropriate and minimise discomfort. Each session began with easy, context-setting questions before progressing to more reflective topics (DeJonckheere and Vaughn 2019).

To support engagement and recall (Gray 2021), each session began with individual handouts depicting 24 yoga poses and a 'Sun Salutation' sequence (Appendix 6). These visuals encouraged conversation, with children recognising and discussing familiar poses, aligning with Epstein et al.'s (2006, p. 2) suggestion that graphics can "*make interviews fun and not like a test in school.*"

All interviews followed the same format, visual prompts, followed by scripted questions. Duration varied by group (see Table 3.3) and is discussed further in Chapter 6. Each session concluded with time for participant questions and expressions of appreciation. To ensure confidentiality, groups were kept separate, and the process repeated with the next group.

3.5.6.3 Adult interview procedure

Adult participants initially consented via the scoping questionnaire and provided signed informed consent on the interview day (Appendix 7 - Principal and Appendix 8 - Teacher). Interviews took place in quiet comfortable settings (offices and small classroom), free from interruptions, meeting the recommended criteria (Edwards and Holland 2013), with one online interview conducted via Zoom in a suitable home environment.

At the outset, participants confirmed that they had the information sheet, understood the purpose, and agreed to recording. A Sony ICD-PX470 device was used, following guidance that supports rapport more effectively than note taking (Edwards and Holland 2013).

Each participant received an interview guide (Appendices 9-11), and a document titled, '*SQ3a. Responses with Religious Connotations Prompt*' related to question thirteen in the interview guide. Interviews opened with brief demographic questions to build rapport (Ryan et al. 2009), before moving through the semi-structured guide. Participants were invited to offer final reflections and were thanked for their time.

3.5.7 Analytical Strategy

This section outlines the use of Reflexive Thematic Analysis (RTA) and the application of Bronfenbrenner's Social Ecological Theory (EST) in analysing interview data.

3.5.7.1 Reflexive Thematic Analysis and Social Ecological Theory

Reflexive Thematic Analysis (RTA) is a method for developing and analysing patterns of meaning (themes) across a data set, with each theme reflecting an aspect of the research question (Braun and Clarke 2006). Themes are composed of groups of codes reflecting

patterned meaning; however, there is no prescribed number of codes per theme, nor are themes ranked by the number of codes contained (Braun and Clarke 2021).

RTA is recognised for its theoretical flexibility, allowing researchers to draw on frameworks appropriate to the study (Trainor and Bundon 2020). It was particularly well suited to this study due to its emphasis on reflexivity and its capacity to explore complex, context-dependent experiences (Olmos-Vega et al. 2023). This was important for analysing the varied perspectives of stakeholders positioned across different levels of school systems (Wiltshire and Ronkainen 2021).

In this study the research questions and findings from the scoping questionnaire (Section 3.3) shaped a hybrid approach combining deductive (theory-driven) and inductive (data driven) made possible by RTA's adaptability (Trainor and Bundon 2020). The deductive element was informed by the overarching theoretical framework, Ecological Systems Theory (EST), alongside the research questions and the development of interview questions (see Table 3.1 for the alignment of interview questions with EST). While EST did not dictate predefined codes, it offered a conceptual structure for initial deductive orientation, sensitising the researcher to different levels of influence, including individual (e.g., student self-regulation), interpersonal (e.g., teacher-student relationships), organisational (e.g., school policy and leadership support), and community/cultural contexts (e.g., religious considerations). This ecological lens supported the development of parent and child codes that reflected the embedded and interrelated nature of the children's school experiences.

In contrast, the inductive element involved close, iterative engagement with the data itself, which enabled the identification of unanticipated codes and meanings that did not really align with pre-existing theory (Swain 2018). This included subtle discourses around fear of yoga's spiritual roots, practical adaptations in classroom delivery, and contradictions in stakeholder attitudes. The use of EST complemented this hybrid use of RTA by offering a scaffolding through which these inductively developed insights could be organised and interpreted across ecological layers (Bronfenbrenner 1979,2005). Figure 3.3 illustrates the complexity of these interactions, depicting how diverse stakeholder perspectives intersect across different systemic levels within the school environment.

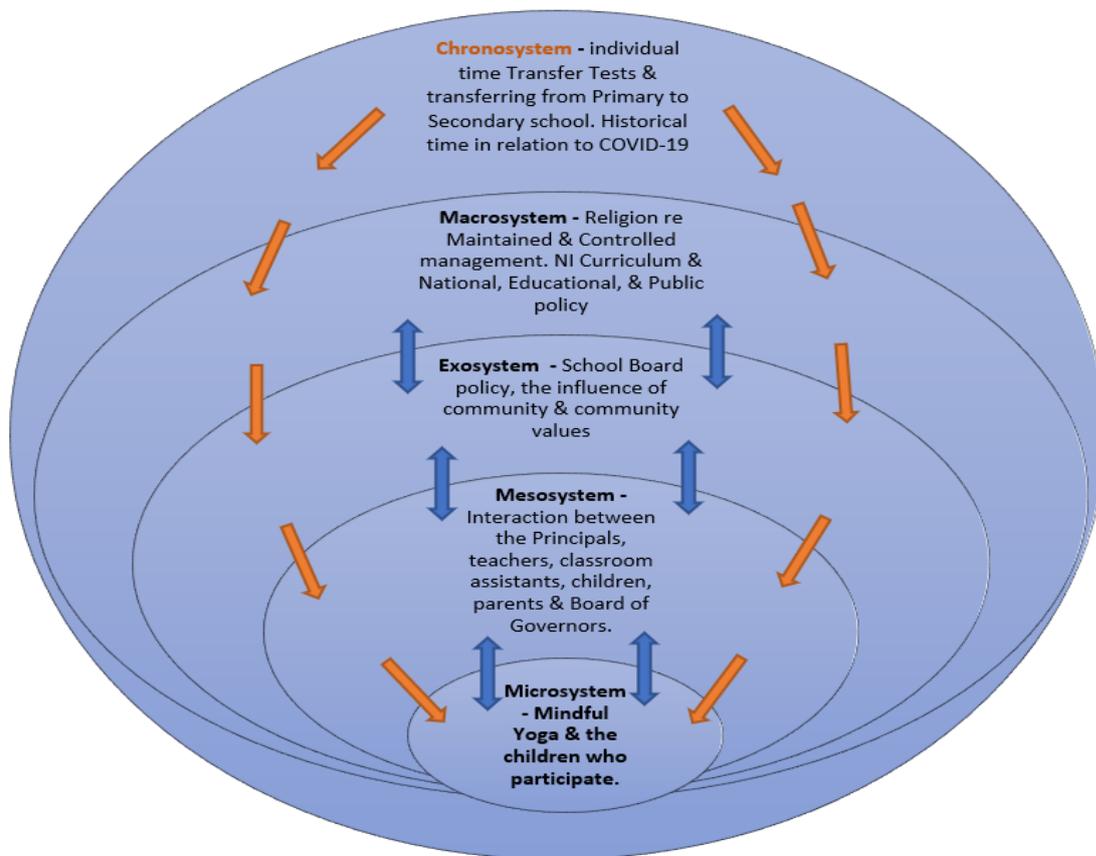


Figure 3.3: Application of Social Ecological Theory to the case study context

Importantly RTA is inherently participant-centred, focusing on participants voices and lived experiences. In this study, RTA was employed to ensure the authentic representation of principals, teachers, classroom assistants, and children (Nowell et al. 2017). Ecological Systems Theory further reinforces this approach, highlighting the importance of understanding individuals within their broader social and cultural contexts (Bronfenbrenner 1986; Bronfenbrenner and Morris 2006). Following analysis, the findings may have practical implications, as the themes generated through RTA can be translated into recommendations for future school policy and practice (McHale et al. 2021). Moreover, adopting a socioecological lens acknowledges that interventions related to health and wellbeing “are too complex to be understood adequately from single levels of analysis”, and thus require frameworks that integrate community-based, cultural, and organisational perspectives (Stokols 1996, p. 283).

3.5.7.2 NVivo Software

To support the process of theme development, NVivo software was employed (Meehan and Taylor 2022). NVivo facilitated systematic exploration of the data in line with the six steps of Reflexive Thematic Analysis as outlined by Braun and Clarke (2006); (Braun and Clarke 2019). Importantly, NVivo enabled the structured application of EST during the deductive coding phase. Codes were created to correspond to EST levels (individual, interpersonal, organisational, and community/cultural), ensuring the coding process systematically captured, multi-layered influences described in the theoretical framework.

The software also allowed for a clear visual presentation of the methods, methodology, and paradigm employed, particularly the hybrid inductive/deductive approach. Furthermore, NVivo automatically generated an audit trail, mapping and time-stamping each stage of the analytical process and enhancing transparency (Bonello and Meehan 2019). While Braun and Clarke (2019) caution against a robotic application of RTA and stress the importance of researcher reflexivity, NVivo's etymology, derived from the Latin '*in vivo*' and translates as (of a process) '*performed or taking place within a living organism*' (Meehan and Taylor 2022). This aptly reflects its role in supporting an iterative and dynamic analysis process rather than replacing the researcher's interpretive judgement.

3.5.7.3 Application of reflexive thematic analysis through NVivo software

NVivo supported the storage, organisation, and analysis of both quantitative and qualitative data across the six iterative phases of Reflexive Thematic Analysis. It is important to note that the analysis process was iterative rather than strictly linear, with earlier phases revisited to refine findings as necessary.

3.5.7.3.1 Phase 1. Data Familiarisation

This initial phase involved reading and re-reading scoping questionnaire responses and interview transcriptions to deepen familiarity with the data. Seven transcripts, totalling 35,512 words, were imported into NVivo, which streamlined the management and organisation of the large data set. The software supported a visual learning style, enabling

marginal notes, highlights, and annotations, all stored systematically. This functionality helped identify and cross-reference emerging points of interest.

3.5.7.3.2 Phase 2. Systematic Data Coding

Using the annotations and highlighted text from Phase 1, relevant content was coded, as basic units of meaning to capture important features of the data, following Braun and Clarke's (2021) approach. Codes were developed to reflect both anticipated areas of inquiry, informed by the theoretical framework, research questions, and emergent content that did not fit pre-existing categories. An initial code list was iteratively developed and organised in NVivo (Appendix 12).

3.5.7.3.3 Phase 3. Generating Initial Themes

After several coding cycles, individual codes were collated into potential themes. Braun and Clarke (2021, p. 35) define themes as "*clusters of codes that seem to share a core idea or concept.*" NVivo's visual tools, such as Mind Maps and Concept Maps, were used to develop these clusters, Figure 3.4 depicts a Concept Map of initial themes. This was printed and further annotated by hand, allowing for refinement by renaming and re-positioning codes (Figure 3.5). This was a highly iterative and reflexive process, with original transcripts and annotations revisited to inform decisions. The development of Figures 3.4 and 3.5 facilitated the creation of a Mind Map (Figure 3.6), providing a clearer overview of how codes were grouped under the initial themes.

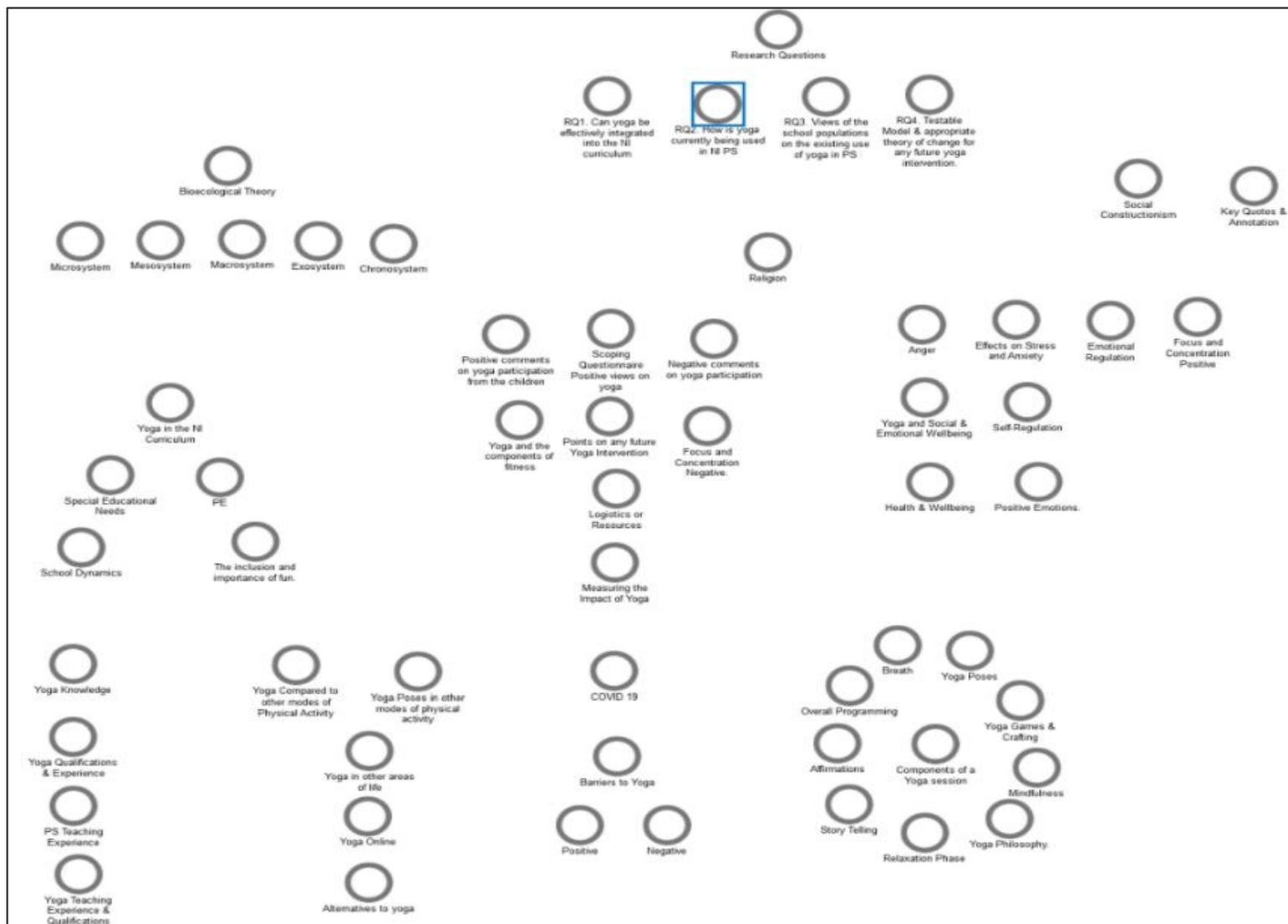


Figure 3.4: Concept Map with codes grouped into initial themes

3.5.7.3.4 Phase 4. Developing and Reviewing Themes

Themes were assessed for coherence, distinctiveness, and relevance. Some were merged, split, or discarded. Trainor and Bundon (2020, p. 718) highlight the challenge of distinguishing true themes from mere 'domains of discussion'; this posed a particular challenge to the researcher. Domains of discussion are groupings of data around a shared topic but lack a unifying pattern of meaning; in contrast, themes capture shared meaning underpinned by a central organising concept (Braun and Clarke 2019).

For example, 'Religion' was initially identified as a potential theme (see Figure 3.6). However, upon closer examination, it functioned more as a domain, grouping responses around a common topic without revealing deeper, consistent patterns of meaning. Recognising this distinction prompted further iterative analysis to ensure only those groupings demonstrating a coherent and meaningful narrative were developed into final themes.

3.5.7.3.5 Phase 5. Refining, Defining and Naming Themes

Revisiting the codes and associated qualitative data connected to the domain of 'Religion' enabled further refinement. Through this process, elements from the domain were integrated into a broader, more cohesive theme titled, *Faithful integration: navigating spiritual concerns in educational practices*. This phase focused on defining the essence of each theme, ensuring clarity about what each theme represented and the specific aspects of the data it captured.

3.5.7.3.6 Phase 6. Writing the Report

The full analysis is presented in Chapter 5 (Case Study Findings), with in-depth exploration of each theme. Chapter 6 (Discussion) then connects findings to the broader literature, using data extracts to illustrate each theme and build a coherent narrative in response to the research questions.

3.6 Conclusion

This chapter outlined the methodological approach used to explore the current and potential future role of yoga in supporting the social and emotional wellbeing of primary school-aged children in NI. Grounded in a critical realist paradigm and informed by a social constructionist perspective, the study adopted a sequential mixed methods design to explore this complex phenomenon within its educational context.

Bronfenbrenner's EST informed all stages, from philosophical positioning and case study design to sampling, interview development, and data interpretation. The Phase One questionnaire offered contextual insight and informed the selection of case study schools. Phase Two enabled in-depth exploration of how yoga was understood and implemented in contrasting school environments.

Reflexive Thematic Analysis, supported by NVivo, offered a flexible yet rigorous analytic strategy aligned with the study's interpretive aims. RTA facilitated both theory-driven and inductive theme development, while NVivo enhanced code transparency across ecological levels. This approach captured the perspectives of pupils, teachers, classroom assistants, and principals, within a socioecological framework.

Overall, the integration of paradigm, theory, and method ensured a contextually grounded and theoretically robust response to the research questions.

Chapter 4: Scoping Questionnaire Results

4.1 Introduction

This chapter presents the findings from the scoping questionnaire, which aimed to assess current provision of yoga in primary schools in NI. The data were analysed using descriptive statistical techniques and results are structured into key thematic areas. Measures of central tendency (mean) and variability (standard deviation) are used to summarise key statistics where applicable. Frequency distributions and percentage calculations were also applied to compare different groups within the dataset.

The chapter provides an overview of the response rate to the questionnaire, including the demographic breakdown of participating schools. It then examines the schools not currently delivering yoga, exploring the reasons for this, and their potential interest in future provision. Subsequently, it presents an analysis of schools that do deliver yoga, including information on year groups targeted, curricular integration, modes of delivery, and the qualifications held by yoga instructors. Finally, the chapter identifies the primary schools that expressed an interest in participating in the Phase Two qualitative case study, providing demographic insights into these schools.

The chapter concludes with a summary of the key findings, setting the foundation for a more in-depth analysis in Chapter 6.

4.2 Overall response to the questionnaire

The Department of Education for NI (DENI) reported a total of 784 primary schools in NI during the 2021/2022 academic year when the questionnaire was conducted. In total, 96 surveys were completed, a 12.2% response rate. One respondent indicated that they did not wish to complete the questionnaire and was therefore excluded from the analysis.

Additionally, two respondents (NYS34 and NYS41) answered only Question 2 (indicating that *their schools did not deliver yoga*) and Question 3 (*reporting the absence of trained yoga instructors*) but did not provide their schools' classifications. These two respondents were also excluded. Consequently, 93 schools were included in the final analysis, broadly reflecting the overall composition of the NI primary school sector by management type (Table 4.1). Of these, 25.8% (n=24) reported delivering yoga to their pupils, while 74.2% (n=69) did not.

Table 4:1: Composition of primary schools in NI by management type compared to scoping questionnaire respondents.

Classification	Primary Schools in Northern Ireland		Scoping Questionnaire Response	
	Number	Percentage	Number	Percentage
Controlled	355	45.3	48	51.6
Catholic Maintained	382	48.7	40	43.0
Integrated	47	6.0	5	5.4
TOTAL	784	100.0	93	100

4.3 Schools who currently do not deliver yoga

For schools that indicated they did not deliver yoga (n=69), Question 3 provided a list of possible reasons for this, allowing respondents to select all that applied (Table 4.2).

Respondents selected, on average, two reasons per school ($M = 2.2$, $SD = 1.6$). An additional option invited respondents to specify other reasons, which are presented in table 4.3.

Table 4:2: Reasons for not delivering yoga to pupils

Reasons for not delivering yoga (Respondents selected all that applied)	Number	Percentage
No trained yoga instructors within the school	63	42.9%
No equipment within the school	20	13.6%
Other (please specify via Question 3a.)	19	12.9%
Unable to be timetabled during the school day	11	7.5%
No availability of facility within the school	10	6.8%
No appropriate facility within the school	9	6.1%
Unable to be timetabled before the school day	7	4.8%
Unable to be timetabled after the school day	7	4.8%
Lack of pupil interest	1	0.7%
	147*	100%

*N is greater than total number of schools as some schools selected more than one option

4.3.1 Reasons for not delivering yoga

As shown in Table 4.2, the most commonly reported reason for not currently delivering yoga was the lack of trained yoga instructors within the school (42.9%). An additional 19

respondents (12.9%) selected 'Other,' and provided open text responses. These were categorised into three main groups:

- (i) Lack of funding or resources
- (ii) Conflict with religious beliefs
- (iii) Provision of alternative wellbeing approaches

Funding and resource-related barriers were frequently cited. For example, one respondent noted:

"We have run taster days before but do not have the funding to do this on a long-term basis."

Religious or philosophical objections were also evident, echoing concerns raised in later responses about future provision (Section 4.2.2). These included explicit references to school ethos, for example:

"Opposed to the philosophy/new age spirituality that forms the basis of yoga and this type of meditative activity."

In addition, several respondents described how they had opted for alternative wellbeing programmes. One school shared:

"Many classes use 'Cosmic yoga' regularly... In the past we have also used 'Relax Kids'... as an after-school activity."

Another school explained their preference for nature-based wellbeing activities:

"We opted to support outdoor classroom and forest school approaches as opposed to yoga."

These qualitative insights support the broader thematic findings and help contextualise the quantitative data presented in Table 4.2.

4.3.2 Future provision of yoga

Respondents were also invited to comment on potential future provision of yoga in their schools. Of the 69 schools not currently delivering yoga, 48 (69.6%) expressed interest in introducing it, 9 (13%) were not interested, and 12 (17.4%) were unsure.

Responses were grouped into three thematic categories:

- (i) Funding and/or resource constraints
- (ii) Religious or philosophical objections, and
- (iii) Uncategorized or exploratory comments.

The majority of comments focused on practical barriers such as staffing, space, and training needs. One principal, for example, wrote:

“Definitely interested but unable to facilitate due to lack of suitable accommodation.”

Others cited concerns about workload and the pressure on staff:

“We have significant support in place for wellbeing and teachers are under significant pressure. I am wary about adding something else into the programme that will require more training.”

Religious objections were again referenced, mirroring earlier findings. One principal explained:

“Much of the philosophy/spirituality of yoga and similar meditative practices is at odds with the Christian faith, a view supported by the majority of our Governors and staff.”

A small number of respondents expressed interest but requested more information on the benefits of yoga:

The full list of verbatim responses is provided in Appendix 13.

4.4 Schools currently delivering yoga

This section is divided into two sub-sections. Section 4.3.1 reviews responses from schools currently delivering yoga, examining the characteristics of provision, including year groups targeted, curricula integration, modes of delivery, and frequency of sessions. Section 4.3.2 explores the qualifications held by school yoga instructors.

Of the 24 primary schools delivering yoga, the majority were Controlled schools (n=14, 58.3%), followed by Catholic Maintained schools (n=9, 37.5%), and one Integrated school (4.2%). This distribution broadly reflects the overall composition of survey respondents,

indicating that no single management type was disproportionately more likely to offer yoga. Instead, the pattern reflects the greater representation of Controlled schools within the sample.

4.4.1 Delivery of yoga

Table 4.5 shows that 19 of the 24 schools delivered yoga across multiple year groups, with an average of four year groups per school ($SD=2.28$). Eight schools (33.3%) delivered yoga to all seven year groups.

Table 4:3: number of year groups targeted per school for yoga delivery (N=24)

Number of year groups delivered to	Number of schools delivering to this number of year groups	Percentage of schools delivering to this number of year groups
1	5	20.8%
2	2	8.3%
3	4	16.7%
4	2	8.3%
5	3	12.5%
7	8	33.3%
Total	24 (M = 4, SD = 2.28)	100%

Year groups 1-3 were the most frequently targeted, with between 62.5% and 70.8% of schools delivering yoga to these groups (Table 4.4). Delivery to composite classes was less common, occurring in only 16.7% of schools.

Table 4:4: Most targeted year groups for yoga delivery (N=24)

Year Group	Number of schools delivering to this year group (Year 1 to year 7)	Percentage of schools delivering to this group (Year 1 to year 7)
1	17	70.8%
2	15	62.5%
3	17	70.8%
4	12	50.0%
5	14	58.3%
6	11	45.8%
7	13	54.2%
Composite	4	16.7%

The NI Primary Curriculum is structured over six areas of learning;

1. Language and Literacy
2. Mathematics and Numeracy
3. The Arts
4. The World Around Us
5. Personal Development and Mutual Understanding (PDMU)
6. Physical Education (PE)

Yoga delivery primarily took place through PE (79.2%) and PDMU (66.7%). The breakdown of delivery across curricular areas is presented in Table 4.5.

Table 4.5: Curricular area of yoga delivery (N=24)

Curriculum area	Number of schools	Percentage of schools
Physical Education	19	79.2%
Personal Development & Mutual Understanding	16	66.7%
Other Curricula	3	12.5%
Extra Curricula	3	12.5%

Table 4.6 highlights the range in the number of sessions delivered across the academic year, with session durations varying from 5-10-minute mindful ‘brain breaks’ to 45–60-minute structured yoga classes. **One respondent did not answer this question.*

Table 4.6: Number of yoga sessions delivered per academic year per year group (N=23)*

Sessions each academic year per year group	Number of Schools	Percentage of schools
6-12	10	43.5%
6-week blocks	2	8.7%
1 session per week	3	13.0%
2 - 5 times daily as relaxation sessions	2	8.7%
20-25	3	13.0%
5 per group	1	4.3%
In Social Communication Units and P1 - daily 10 mins	1	4.3%
2 or 3 maybe. some year groups do not receive any.	1	4.3%
Total	23	100%

Modes of delivery varied widely, ranging from online resources to in-person instruction by qualified yoga teachers. The different modes of delivery reported by the schools are detailed in Table 4.7.

Table 4:7: Mode of delivery (N=24)

Mode of Delivery	Number	Percentage
Primary School Teacher	7	8.3%
Primary School Teacher via online app (Cosmic Kids), and a year 3&4 teacher, and a classroom assistant.	1	4.2%
Primary School Teacher, Outside Yoga Instructor	2	8.3%
Primary School Teacher, through online app (GoNoodle, Cosmic Kids, YouTube)	7	29.2%
Outside Yoga Instructor (a parent who is a qualified yoga instructor)	1	4.2%
Outside Yoga Instructor	6	16.7%
Total	24	100%

4.4.2 Yoga teaching qualifications

This section focuses on the qualifications held by those delivering yoga in primary schools. In NI, primary school teachers typically complete a four-year undergraduate degree. However, a certified 200-hour teacher training qualification is generally considered the preferred credential for yoga instruction in community or educational settings.

Of the 11 respondents who reported that yoga was being delivered in their school, just under half (45.8%) indicated that the instructor held a recognised yoga qualification. Despite this, only four of these respondents (36.4%) could confirm the specific certification held. Two noted a general yoga teacher qualification, while two others cited certification specific to teaching yoga to children. No respondents reported that instructors held both types of certifications. The majority (63.6%) were unsure whether the instructor held any formal qualification.

4.5 Primary schools expressing interest in participating in Phase Two

This section details the primary schools that expressed interest in participating as case study sites for Phase Two and will be referred to as Expression of Interest Primary Schools (EoI PS).

4.5.1 School demographics

To maintain anonymity, only the EoI PS (n=9) were asked to provide their school's name. One respondent did not do so and could not be contacted, resulting in eight schools being included in the final analysis.

Available data allowed for descriptive analysis across several characteristics: management type, school location (urban or rural), pupil enrolment figures, religious composition, and the percentage of pupils eligible for free school meals (FSME). Based on DENI (2021b) records, school enrolments ranged from 71 to 532 pupils, with an average of 249.5 pupils slightly above the national average of 228 pupils.

Regarding management type, six schools (75%) were Controlled and two (25%) were Maintained. Most schools were located in urban areas (62.5%), while the remaining 37.5% were located in rural settings. The average FSME rate among EoI schools was 27.8%, slightly below the NI primary school average of 28.2%. This suggests that the schools expressing interest Phase Two participation broadly reflect the demographic and socio-economic characteristics of the wider primary sector.

4.5.2 Yoga teaching qualifications in expression of interest primary schools

Five respondents (62.5%) from the EoI schools reported that the person delivering yoga was qualified. Of these, three were external yoga instructors, one was a primary school teacher, and one was a classroom assistant. However, only two respondents (25.0%) could verify the qualification held while 5 (62.5%) did not know the qualifications of the instructor.

4.5.3 Influence of Phase One findings on Phase Two design

Findings from the scoping questionnaire directly informed the refinement of Phase Two methods. Open-ended responses revealed key contextual influences on yoga

implementation, particularly religious or philosophical objections linked to school ethos, parental values, and Board of Governor input. These perspectives were not captured in closed questions and emphasised the need for more culturally sensitive inquiry in the qualitative phase.

In response, the adult interview schedules were revised to include a dedicated question on religion and yoga, supported by a prompt sheet (SQ3a) featuring anonymised verbatim quotations. Other recurrent survey themes, such as staffing shortages, timetabling constraints, and variability in instructor qualifications, shaped the inclusion of specific prompts during interviews. This iterative process ensured that the qualitative phase was responsive to lived challenges and grounded in realities expressed by Phase One participants.

4.6 Conclusion

This chapter presented the results of the scoping questionnaire, which explored the current provision of yoga in primary schools across NI. Although the response rate was modest (12.2%), it reflected common challenges in online survey research. It was also broadly in line with typical return rates in educational contexts, which often range from 20% to 30% (Nayak and Narayan 2019), and the sample reflected the sector's overall management structure (see Table 4.1).

The findings revealed several key themes regarding current yoga provision in NI primary schools. Structural barriers such as funding, staffing, and timetabling were the most frequently cited challenges. Religious and philosophical concerns, often tied to school ethos and parental values, also emerged as significant. Despite these issues, most non-delivering schools expressed interest in future provision, suggesting unmet demand. Among schools delivering yoga, variation in delivery modes and instructor qualifications indicated a need for clearer training standards and guidance to ensure consistency and quality.

Importantly, these findings shaped the design of Phase Two. They informed the development of culturally sensitive and practically relevant interview schedules and materials. The scoping questionnaire thus served not only as a descriptive tool but also as a foundation for the qualitative case study work that follows in Chapter 5.

Chapter 5: Case Study Findings

5.1 Introduction

This chapter presents the findings from Phase Two, analysed using Reflexive Thematic Analysis and interpreted through Bronfenbrenner's EST (Bronfenbrenner 1979) and his later Process, Person, Context, and Time (PPCT) model (Bronfenbrenner 2005). These frameworks enabled an in-depth exploration of how contextual, interpersonal, and temporal factors shape the implementation and experience of yoga in two NI primary schools. The chapter begins by outlining participant demographics and school profiles, before presenting five key themes that were identified within the data.

A thematic map illustrates the interconnectedness of the themes, which are situated within and across ecological levels. The themes are structured to reflect a logical progression from macro to micro-level influences, beginning with the post-pandemic prioritisation of wellbeing and moving toward practical issues of delivery and integration. Interview excerpts from principals, yoga instructors, and pupils are included to illustrate participants' perspectives. The chapter concludes by summarising key findings and setting the stage for critical analysis in Chapter 6.

5.1.1 Case Study participants and unique reference numbers

Two primary schools participated in the case study phase: one large, urban school with an above average percentage of pupils eligible for free school meals (PS1), and one small, rural school with a below-average percentage (PS2). Both were under controlled management.

A total of eighteen participants were involved across the two schools. In PS1, this included the principal, a teacher who also delivered yoga, and fourteen Year 7 pupils, grouped for interviews. In PS2, the principal and a classroom assistant who also taught yoga participated. Children from PS2 were unavailable for interview.

To preserve anonymity, each participant was assigned a unique reference number (URN). These are presented in Table 5.1. And used throughout the analysis. Detailed participant and school profiles are provided in Section 5.1.2.

Table 5:1: Case study schools' participants and unique reference numbers (URN)

Primary School 1 (PS1)		Primary School 2 (PS2)	
Participant	URN	Participant	URN
Principal	PS1P	Principal	PS2P
Teacher & Yoga Teacher	PS1TYT	Classroom Assistant & Yoga Teacher	PS2CAYT
Group 1, Child 2	PS1G1C2		
Group 1, Child 7	PS1G1C7		
Group 1, Child 10	PS1G1C10		
Group 1, Child 13	PS1G1C13		
Group 1, Child 14	PS1G1C14		
Group 2, Child 6	PS1G2C6		
Group 2, Child 1	PS1G2C1		
Group 2, Child 3	PS1G2C3		
Group 2, Child 8	PS1G2C8		
Group 2, Child 9	PS1G2C9		
Group 2, Child 12	PS1G2C12		
Group 3, Child 11	PS1G3C11		
Group 3, Child 5	PS1G3C5		
Group 3, Child 4	PS1G3C4		

5.1.2 Case study profiles

Primary School 1 (PS1) is a large, urban Controlled school located in an area of high social deprivation, with an above-average percentage of pupils eligible for free school meals (FSME). All group interviews with pupils were conducted in PS1, as children in PS2 were unavailable for interview.

The principal (PS1P) is a white female with twenty-eight years of experience in education, seventeen of which have been in headship roles. Though she had no prior experience of yoga in schools, she supported the introduction of wellbeing initiatives, including mindfulness practices led by the school's SENCo.

The Teacher and Yoga Teacher (PS1TYT) is a white female PE specialist in her thirties with six years of teaching experience. A yoga practitioner herself, she began integrating yoga into her PE classes early in her career and later established an online mindfulness and yoga business. Her appointment strengthened the school's delivery of wellbeing oriented physical activity.

Primary School 2 (PS2) is a small, rural Controlled school in an area of low social deprivation, with a below average percentage of FSME.

The principal (PS2P) is a white female in her forties with sixteen years of teaching experience and two years in her current post. She had undertaken a short 'Yoga in Primary Schools' training course in a previous role and introduced basic practices in her own classroom.

The Classroom Assistant and Yoga Teacher (PS2CAYT) is a white female in her early fifties, with three years of experience as a classroom assistant. She is a fully certified yoga instructor and brings nearly 30 years of experience in the fitness industry, having worked with children and adults alike. At the time of the interview, she had completed one block of yoga delivery in PS2.

Further information on recruitment procedures is provided in Section 3.5.4.

5.1.3 Structuring the case study findings: A socioecological perspective

The presentation of findings in this chapter is structured using Bronfenbrenner's Ecological Systems Theory (EST), which, as outlined in Chapters 2 and 3 offers a multi-layered framework for analysing how contextual and temporal influences shape children's development and educational experience. This approach is particularly suited to the complex, embedded nature of implementing yoga in school environments, as it accounts for the dynamic interactions between individuals, institutions, communities, and policy systems over time.

This chapter also draws on Bronfenbrenner's (2006) later PPCT model, recognising how the post-pandemic chronosystem shaped participants views on wellbeing, stress, and emotional regulation. The findings are therefore interpreted not only through nested systems (micro to macro) but also in relation to shifting priorities and challenges emerging in the aftermath of COVID-19.

Five themes were developed through Reflexive Thematic analysis of the qualitative data gathered from individual and small group interviews (Table 5.2). These themes are mapped onto the ecological layers to illustrate how yoga implementation and engagement were

shaped by multiple interacting influences. While each theme is primarily situated within a specific ecological level, the analysis recognises the fluidity and interconnectedness across systems. Illustrative quotes are used throughout to demonstrate how pupils, teachers, principals, and yoga instructors navigated both structural constraints and cultural values.

Table 5:2: Mapping of emergent themes to Ecological Systems Theory

Theme	Ecological Level(s)	Description of Influence
Prehabilitation: Prioritising mental wellness for productivity, learning, and life	Macrosystem / Chronosystem	Reflects shifting societal and policy discourses on mental health following COVID-19 and their impact on health.
Academic stress and coping strategies: The role of yoga and mindfulness	Microsystem / Intrapersonal	Explores how yoga practices supported children’s emotional regulation during academic and social transitions.
Breath as the anchor: The fundamental role of pranayama in mindful yoga practice	Microsystem / Intrapersonal	Demonstrates how breathwork practices influenced children’s immediate experiences of calm, focus, and self-awareness.
Faithful integration: navigating spiritual concerns in educational practice	Exosystem / Macrosystem	Captures the influence of community ethos, parental beliefs, and school governance on decisions about yoga.
Integrating mindful yoga into school curricula: Challenges and opportunities	Exosystem / Mesosystem	Highlights institutional barriers including timetabling, staffing, funding, and integration into existing curricula.

This framing ensures that the presentation of findings remains theoretically grounded while allowing for a rich, context-sensitive interpretation of how yoga was received, adapted, and embedded, or resisted, within NI primary schools.

5.2 The themes

The themes from the analysis are organised to reflect a logical progression of insights. It begins by contextualising the overarching importance of prioritising mental health in schools post-COVID-19, positioning this as a foundational concern that permeates all subsequent themes (Theme 1: Prehabilitation). From this basis the chapter moves on to explore how yoga and mindfulness may support children in coping with school-related stress, particularly around exams and transitions (Theme 2: Academic stress and coping strategies). Building on this, the next theme highlights the core elements of yoga, particularly breathwork, that emerged as fundamental to its perceived benefits (Theme 3: Breath as the anchor). The

chapter then shifts focus to broader systemic considerations, examining the cultural, religious, and curricular factors that influence how yoga is received and implemented in schools (Theme 4: Faithful integration, and Theme 5: Integrating mindful yoga into the school curricula). Together, these themes offer a multi-layered understanding of both the potential and the challenges of embedding yoga within primary school settings in NI.

5.2.1 Theme 1: Prehabilitation - prioritising mental wellness for productivity, learning, and life

This theme deals with the presence of stress, not coping strategies, it is an umbrella theme in that it covers all of the others, it permeates every layer of the Social Ecological Model (Figure 3.3 and Table 5.2). COVID-19 and its aftermath resulted in heightened levels of stress and anxiety in primary schools, and in doing so it also placed a focus on existing stressors that are ingrained into the NI primary school system. This highlights the connection between health, well-being, and productivity in the learning environment. The participants' comments emphasise the importance of having an environment that promotes and nurtures a solid foundation of mental and emotional wellbeing, and that without this, children may struggle to excel in various areas of their lives (Bland and DeRobertis 2017; Steenbakkens et al. 2018). Consequently, the theme suggests the need for the establishment of a preventive approach; hence, *“prehabilitation, the process of enhancing an individual's functional capacity to enable him or her to withstand a forthcoming stressor”* (Banugo and Amoako 2017, p. 401). In this case it related to mental health, the building of a strong foundation to deal with life's known stressors, as opposed to a rehabilitative approach after the stressors have presented themselves in the classroom environment.

The theme captures the dynamic nature of the two Case Study Primary Schools, through the interaction between the key stakeholders in the primary school setting. The theme was viewed from a bioecological perspective (Table 5.2 and Figure 5.1), whereby the multiple systems of influence within the two case study settings were taken into consideration, amongst these, the individual, family, peers, political, cultural, and historical. Consequently, the theme examined each of the participants' interactions within the larger systemic influences, and how these helped facilitate the deployment of yoga within each of the two case study schools.

It is positioned within the chronosystem (Figure 5.1), identified by Bronfenbrenner and Morris (2007) as being the patterning of environmental events and transitions over the life course on the development of the person. The chronosystem can comprise of normative life transitions such as graduation, marriage, and as in this study, the children’s requirement to cope with the transfer test and moving from primary to secondary school.

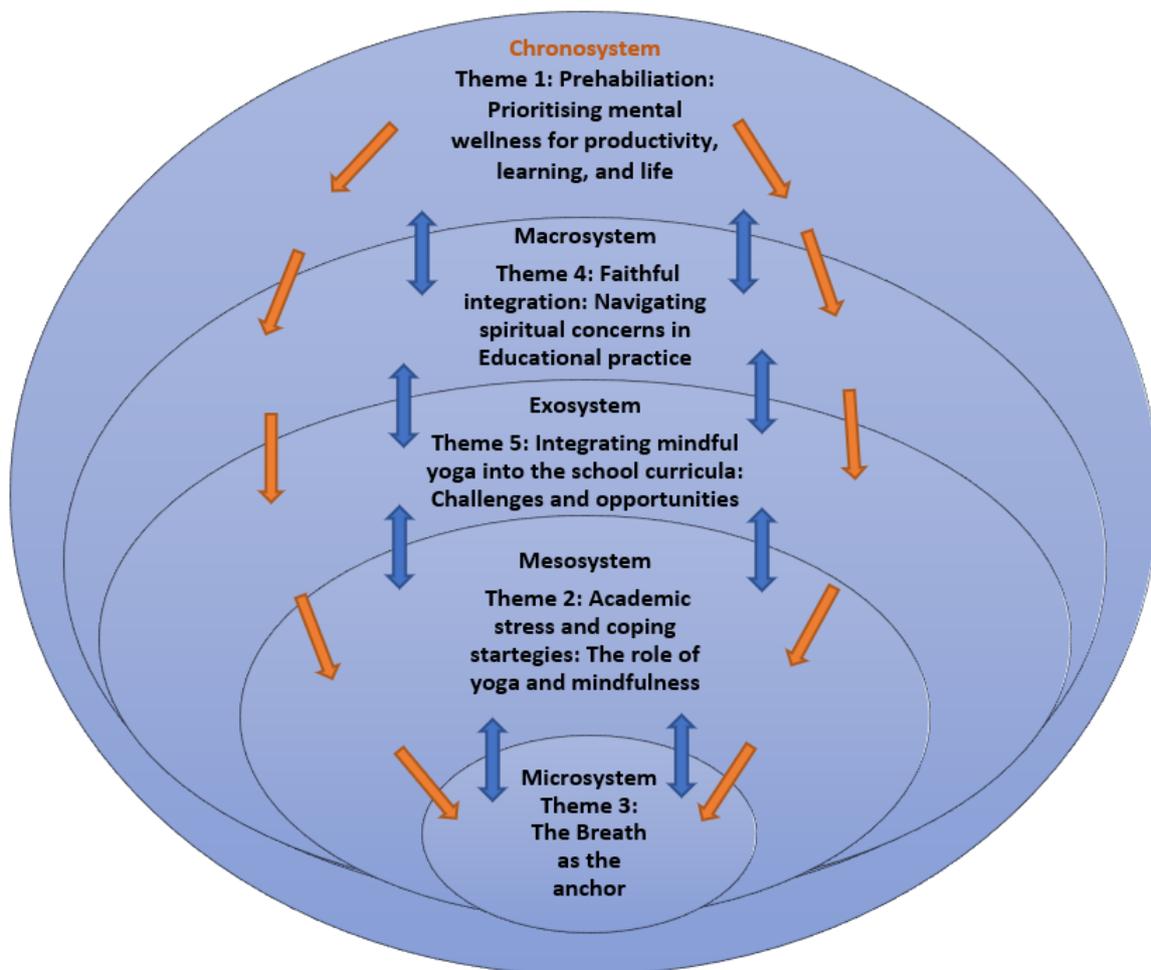


Figure 5.1: The articulation between themes: A socioecological perspective

Additionally, it relates to non-normative life transitions such as an accident, a lottery win, or in this case, historical time in relation to the participants’ experiences within the post-pandemic environment. In this example of lives within a chronosystem, there was the potential for the effects of the pandemic to have a lasting impact on the social and emotional development of those involved (Alfven 2020; Iqbal and Tayyab 2021; Casey and McLaughlin 2022). Essentially, in dealing with the additional stresses incited by a pandemic,

a profound sense of perspective emerged that drew a focus to the existing perennial stresses in primary education.

PS1P: It's up to us to prioritise the things that we think are going to make the impact on children and what the children need at that time.

Hopefully that building up their self-esteem as they go up through school means that when they come to the transfer test, or any other challenges, they can deal with them.

Initially the subjects of stress and anxiety appear in relation to COVID-19, with this topic raised by participants rather than probed by the researcher. Nevertheless, the subject of COVID-19 emerged continuously throughout the interviews.

The post-COVID School Development Plans for both schools were heavily weighted in favour of recovering standards in literacy and numeracy. PS1P agreed with the need to prioritise these core subjects; however, she also recognised the need to address the heightened levels of stress and anxiety within the school,

I know that for any child to be productive and learning, they need to feel comfortable and not anxious. Health and well-being underpin everything... if your mental health isn't good, whether you're a child or an adult, you're not going to be productive.

PS2P concurred and emphasised that in her leadership role it was up to her to prioritise the things that were going to make the greatest impact on the children,

At that time, children needed something to help them manage their post-COVID, mental health ... to relax, switch off, and stop their brains going into overdrive, which many of them talked about.

This was a viewpoint that was shared throughout the management structures of both case study schools with both principals taking a proactive stance on the prioritisation of the children's mental health. This perspective would appear to have spread throughout the school dynamic, as what may have previously been viewed as a potential barrier was used to promote the use of yoga and mindfulness. Two members of the board of governors had roles within the church, one a Minister, and the other a Clerk of Sessions. With their assistance, PS1P attained a grant of £1000 through a church-based group to "use for whatever she seen fit to help address mental health" issues within the school. The principal

explained how she has built up a “*fantastic relationship*” with the board of governors over an eight-year period, they were very supportive, and although they could be cautious around areas concerning the religious education of the children, a great degree of trust had been established.

Prior to the outbreak of COVID-19, PS1TYT had been very keen to introduce mindfulness throughout the school, though this was not part of structured classes. She delivered low level, short sessions within her own classroom practice, in which she was able to work out the practicalities of integrating mindfulness within the primary school classroom setting. Whereas the infusion of finance through the grant allowed PS1TYT to deliver a more targeted approach of structured classes to address the social and emotional wellbeing of the children in the post-COVID school environment.

With similar concerns in her primary school, PS2P did not have a member of staff with the skill set to deliver yoga sessions on site in the immediate post-COVID stage. Therefore, she and her teaching staff addressed some of the post-COVID mental health and wellbeing concerns through the introduction of Cosmic Yoga, an online system that was easily facilitated in the classroom allowing both children and teachers to participate together.

Further impacts of COVID-19 were revealed in the interviews, affecting schools, staff, children, and their parents and wider families. These included the need to address issues related to health and wellbeing. Both children and parents were anxious about the safety of the school environment, and the potential risks in contracting COVID-19. PS1P explained how the children had gone through two full lockdowns which translated to two full terms out of school, the current Year 4’s had not had a normal school year since Year 1, and the current Year 7’s had not had a normal year since Year 4. Furthermore, the Year 7’s would be transitioning to new schools in September 2022, so this was a particularly stressful year for them. PSP1 reveals that from a physical perspective, a lot of the children had gained weight,

We were seeing children coming back post COVID who had actually put on so much weight we didn't recognise them.

and some found coordination in PE and games to be problematic. Additionally, the isolation during lockdown resulted in problems with social interaction.

Oh, 100%. we saw children coming back who had really poor social skills, having not been able to interact with each other in school.

Some had also suffered bereavements with COVID, and if COVID was mentioned at all, they would become really anxious.

They were really stressed, really wound up, both children and parents. We were worried about how the children would come back, and to move into that 'season' of living with COVID, we had to do something positive for their mental health. This seemed to fit so well.

In summary, this theme underlines the importance for schools of recognising and addressing the mental health needs of the children, particularly considering external challenges such as COVID-19. Although the pandemic is all but gone from schools, the key stressors attached to any educational setting remain. PS1P speaks both as a principal and a parent as she brings some perspective to the importance of dealing with the perennial stressors within primary education.

It was the high point of the day, just 2 or 5 minutes to chill. Kids don't usually get that, and parents don't often see it as important. Even for ourselves we forget to take 5 minutes to step back. If COVID taught us anything, it's how much simpler life was when everything was slowed down. Families are now seeing the value of having some 'down time'.

The theme specifically mentions the importance of mental health and well-being for children in the primary school setting, and fundamentally, it implies that a child's ability to learn and thrive in school is heavily influenced by their mental and emotional state. Thus, suggesting a proactive approach in the provision of interventions that support children; one that can help them cope with stress and anxiety and to enhance their well-being.

5.2.2 Theme 2: Academic stress and coping strategies: The role of yoga and mindfulness.

Theme two draws a focus to the internal and external stressors within the school socio ecological system that were identified in Theme 1. It identifies the reactions generated by the stressors, and the effect that yoga and mindfulness were perceived to have on both these stressors and the resulting emotions. Furthermore, it illustrates the feelings associated with mindful yoga practice within the school environment, referring directly to

sentiments associated with the social and emotional wellbeing of primary school children in NI. The theme has two sub-themes.

5.2.2.1 Addressing exam-related stress through mindful yoga and self-empowerment

This sub-theme highlights the stress induced by academic selection tests and encapsulates some of the strategies used to mitigate it. The subject of the transfer test was raised by interviewees in all three group interviews, indicating the academic selection process to be a source of stress for the participating children. Furthermore, both school principals, and both yoga teachers clearly identify the Association for Quality Education (AQE) and Post-Primary Transfer Consortium (PPTC) papers as an “*unavoidable form of stress for the Year 7 children.*”

PS1P: I think children, and particularly at AQE stage, get really anxious about their performance. There's no way around that; it is a performance driven system.

The children commented on the stress involved, and the use of yoga practice and yogic breathing as coping mechanisms to help prepare for the exams.

PS1G1: I used to not go to sleep because I was nervous about the AIQ.

PS1G2C1: I used the starfish (breathing) for the AQE exam, and I think you have to agree it helped.

PS1G3C5: I think it helped because I learned to relax and concentrate more and that does help in schoolwork as well. Also, my mom did yoga with me on the AQE mornings to help me focus.

PS2CAYT took up her position as yoga teacher just as the children were commencing their exams, consequently, her delivery of yoga and mindfulness were used to target post-exam stress and anxiety, as opposed to preparing them for it.

PS2CAYT: The new GL Transfer Test was really intense and nerve wrecking for the children. Afterward, they'd come to me in the hall...two or three classes at a time, and I'd help them wind down and reset.

In her interview PS1P demonstrates that there is a balance to be attained between placing an importance on the successful completion of the transfer test yet communicates the

reality that there are greater concerns in life, and there will be future opportunities in their post-exam lives.

PS1P: We need to help children see that their worth is more than a test score. Mental health matters more, and life isn't over if they don't get the top result. In five years, they'll still be doing the same GCSEs as their friends in grammar school... that's the bigger picture.

Additionally, she emphasises the need to empower the children, to build their self-esteem, to focus on the positives about themselves and to ask themselves, “*what am I good at.*” She has observed the utilisation of mindfulness within the school to put this into practice through short ‘brain breaks’ in the classroom and affirmations at the end of yoga classes. The use of these exercises encourages focus and positivity,

Rather than zoning off into thinking about nothing, they actually think of the things they're good at, the things that make them unique and important.

The importance is placed on the long-term development of these skills to continue to build their self-esteem and equip them with the tools to navigate through not only the AQE, but the challenges they are going to face post-primary and beyond. An example of this post-primary application is given by PS2CAYT as she refers to her previous experience with college-aged children, whereby, she used yoga and mindfulness as a coping mechanism to combat stress and anxiety leading up to their exams.

It started in my previous job, working with 14 to 17-year-olds through the local college. I used yoga, especially around exam time to give them a break, help settle and calm down. It really benefited them.

The following sub-theme addresses the stress associated with the transfer from primary to secondary education.

5.2.2.2 Transition support through mindful practice

As in the previous sub-theme the focus here is on equipping the children with the tools to deal with stress and anxiety, though on this occasion the emphasis is on the emotional challenges associated with the transition from primary school to secondary school (Akos and Galassi 2004; Coelho et al. 2017; Evans et al. 2018). The children interviewed were all part of a year seven cohort, meaning they would all be transitioning from primary school to

secondary school at the start of the next academic year. There were no direct questions associated with this key life event in the interview script; nonetheless, both the children and the adults commented on the emotions associated with the transfer process. In the group interviews, children were asked, *“Did you learn anything new in the yoga classes?”* followed by *“Is there anything you would like to learn more about?”* In response to this PS1G1C13 states that she would like to *“learn more ways to handle anxiety”*. This is echoed by the group as a whole, they acknowledge they have been taught some skills through the yoga classes, with some of these involving *“preparing us for the transfer to our next school”*, and *“how to handle stress and anxiety.”*

This was then followed by a probing question *“So preparing for your next school, is that a stressful time?”* There was a group response to acknowledge this, followed by some individual comments;

*That is so stressful.
That's why I am so worried.
I know like, making friends.*

In PS2, CAYT had specifically addressed the subject of transition in her mindful yoga programme through the incorporation of yoga poses that were reinforced with affirmations.

Certain poses were linked with affirmations like “I am brave”, “I am strong”, especially around summer when Year 6’s and 7’s were transitioning. As they moved through the poses, they repeated the affirmations...so even if just a little sank in, it stayed with them subconsciously.

The poses combined with affirmations were also used by PS1TYT in both her structured classes, and as short ‘mindful breaks’ or ‘brain breaks’. If students were feeling a little anxious, or finding a task particularly difficult she would introduce a pose with an affirmation to the whole class,

Right let’s do tree pose, let’s say “I am strong”, “I’ve got this”, then maybe after a minute, we sit back down and get back to our work.

Having experienced both structured classes and the short ‘brain breaks’ the children were asked, *“What do you think that you learnt in the yoga classes that would help you with your move into your next school?”* PS1G1 and the rest of her group mirror the response from the other groups,

Probably the breathing.

Yeah, the breathing, she taught us a lot of ways to breathe.

In summary, Theme 2 illustrates how yoga and mindfulness were perceived as valuable tools for supporting children during periods of heightened stress, particularly in relation to academic selection and the transition to secondary school. These acute stressors, concentrated at the end of primary education, were addressed through breathwork, affirmations, and mindful movement, which participants felt supported emotional regulation, confidence, and resilience. While these practices offered immediate coping mechanisms, they also laid the groundwork for longer-term wellbeing by equipping pupils with tools they could carry beyond the primary school environment. This theme thereby positions yoga not merely as a wellbeing enhancement strategy, but as a timely intervention during key transitional moments. Notably, this contrasts with its more generalised use in younger year groups, as captured in the scoping questionnaire. This distinction between acute versus everyday stress management, and age-related variations in delivery, will be further examined in the discussion chapter.

5.2.3 Theme 3: Breath as the anchor: The fundamental role of pranayama in mindful yoga practice

This theme highlights the role of the breath as a focal point in mindfulness and yoga practice. Both adults and children provide examples of the use of the breath which positively correlate with stress and anxiety reduction, emotional regulation, and the enhancement of focus and concentration (Zope and Zope 2013; Menezes et al. 2015; Zaccaro et al. 2018; Balban et al. 2023; Kjærvik and Bushman 2024). Participants expressed emotive responses to breath practice, describing feelings of relaxation, calmness, and mental clarity. The children in particular used descriptive language to convey the positive effects of breath-led activities, such as feeling *“like jelly,” “light like a cloud,”* and entering a *“happy place.”* These responses highlight the subjective experiences and emotional benefits associated with breathwork in both this study, and in the previous literature (Case-Smith et al. 2010; Butzer et al. 2017).

Across the seven interviews conducted, participants in each session generated references related to key components of the yoga and mindfulness sessions, as summarised in Table 5.3.

Table 5:3: Components of a yoga session as identified in the NVivo coding of the case study interviews

Components	Files	References
Breath	6	66
Yoga Poses	6	36
Mindfulness	6	28
Yoga Games & Crafting	6	24
Overall Programming	5	20
Relaxation Phase	6	17
Yoga Philosophy.	2	8
Story Telling	1	4
Affirmations	2	2

There were no questions directly relating to the breath in either the adult or child interview scripts. Nonetheless, the breath was one of the most referenced themes during the coding process; both in terms of the number of times it was mentioned and the number of participants who referred to it. Furthermore, it appeared to be strongly associated with self-regulation, stress and anxiety reduction, emotional regulation, and focus and concentration. For instance, in Figure 5.2, all participants in the middle section of the visual representation began referring to breath as soon as they discussed ‘Effects on Stress and Anxiety’. To the left, only five participants spoke exclusively about ‘Breath’, while to the right, only two participants referred solely to ‘Effects on Stress and Anxiety’. This pattern suggests a possible relationship between breathwork and its role in managing stress and anxiety.

A review of all three codes confirmed this, revealing that there were numerous examples of use of the breath to deal with stress and anxiety. As in the previous section, participants were found to have utilised the breath both in exam situations (Section 5.2.2.1), and in key life events such as the transition from primary to secondary education (Section 5.2.2.2). Additionally, there were examples given of how the children utilised yoga and the breath outside of the school environment.

PS1G3C5: I do gymnastics and have just moved up into a harder class. It was a bit scary at first, but then I got to know the moves better. It was hard at first, so I just used the breathing exercise, and it helped.

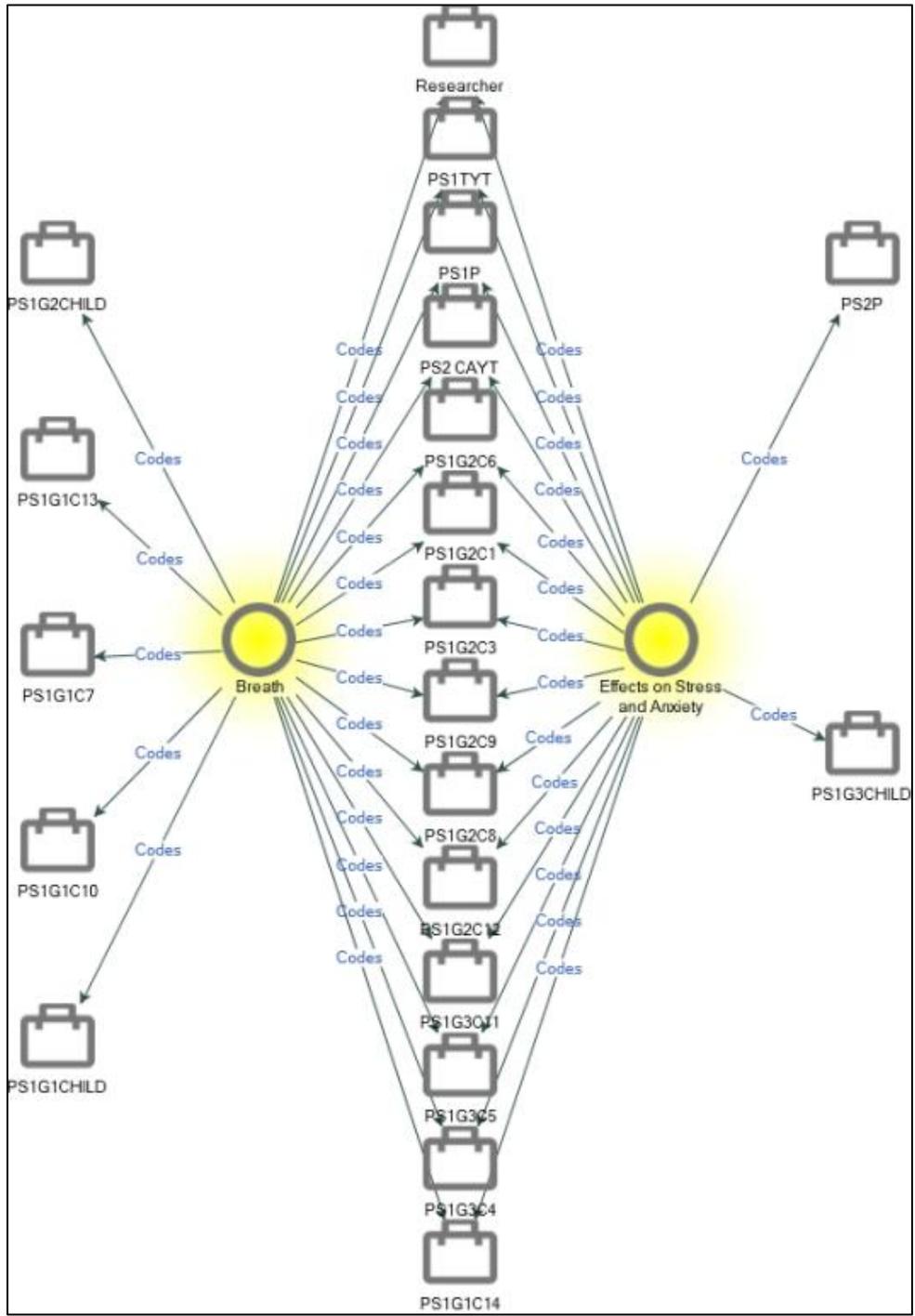


Figure 5.2: The relationship between stress, anxiety, and the use of the breath

PS1G1C7: It teaches you how to handle your anxiety and stress in a way that isn't unhealthy for your mind.

PS1G3C11: I would use it before I go on stage for a dance competition. Yoga's really helped my confidence with dance. It helps you try new things; it helps with confidence."

PS1G2C3: It helps you relax and calm down when trying new things.

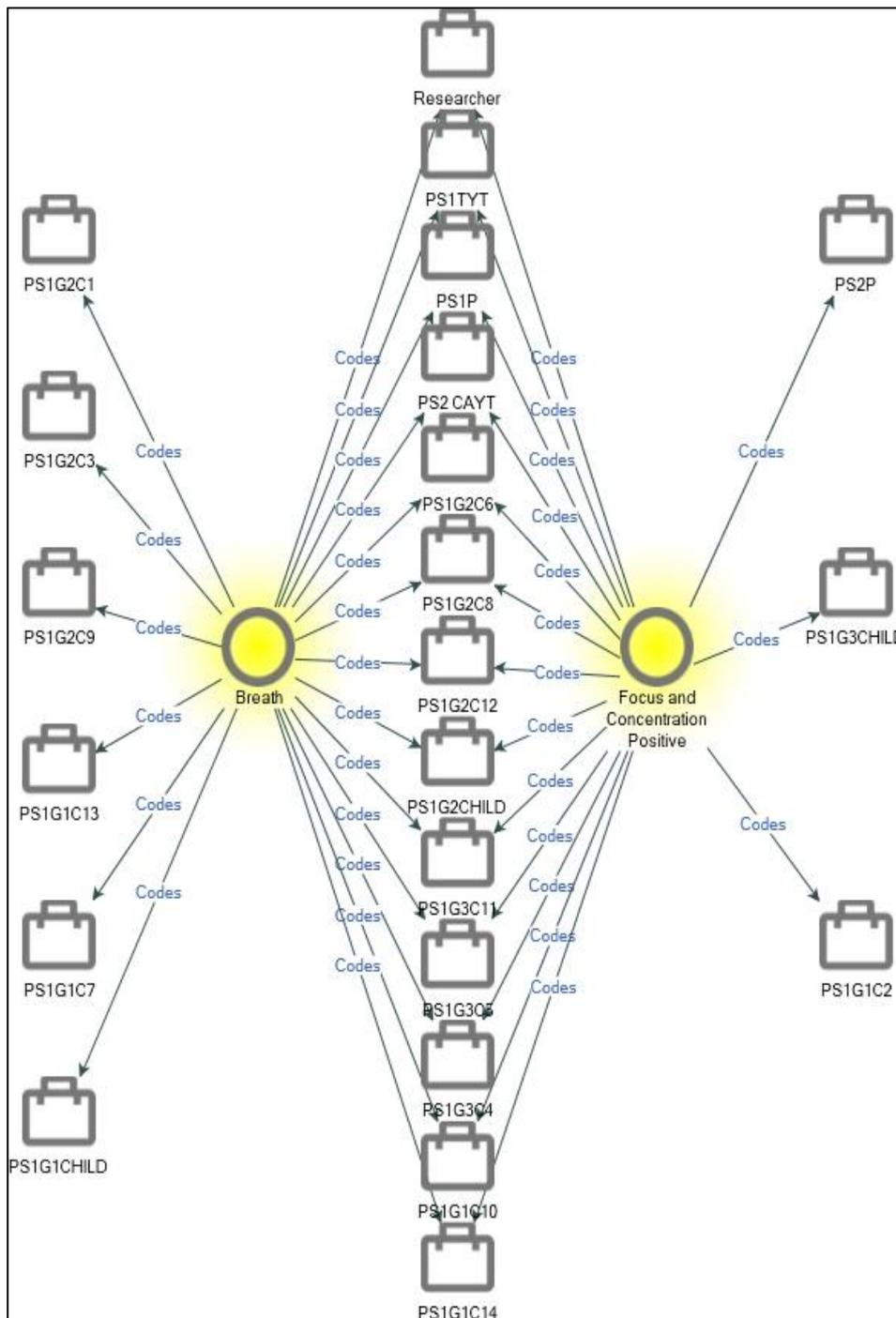


Figure 5.3: The relationship between focus, concentration, and the breath

A similar pattern emerged in Figure 5.3 whereby, when all the participants in the centre, speak of 'Focus and Concentration', they also relate to 'Breath.' To the left only six are solely talking about 'Breath', whereas to the right only three participants refer solely to 'Focus and Concentration'. An example of this from the group interviews would be when the children were asked if they learnt anything new in yoga, PS1G1C2 replies;

It teaches you how to focus more, not be all over the place.

R: What made you focus more, do you think?

PS1G1C2: Probably the breathing.

R: How did that help?

PS1G3C11: It just helped to slow it down.

R: Slow it down?

PS1G3C11: Yes, slow things down, not rush things, enjoy the moment. Just where you are, what you're doing just that moment, not think about the future or the past or anything, just stay where you are.

This response captures the essence of the 'mindful' experience in yoga, whereby, a yoga pose or sequence is executed 'mindfully', resulting in both the physical and mental focus being as one. It explains to an extent why mindfulness and yoga are often confused, as in PSP1P's admission,

I suppose this is the fine line that I don't know the difference between mindfulness and yoga, and where those kind of blend into each other.

In reality, you can practice physical yoga without being mindful, and conversely, you can practice mindfulness outside of yoga, with examples of both revealed in the two case study schools. What has been shown to connect mindfulness and yoga through the experiences of the children and the instructors, has been the use of the breath, this is further highlighted through PS2CAYT.

R: This is the physical part of it. Where does the mental side come into it? How does yoga compare with other modes of physical activity?

PS2 CAYT: Because they have to think about their breath.... they're actually.....

R: Is the focus on the breath then?

PS2CAYT: The focus is most certainly on the breath..... with the movement. They're thinking about movement with the breath, I speak about the breath continually, giving positive instructions, no negativity, there's no, 'I can't do that'. they are doing, they can do.

The 'breath with the movement' relates to each pose in a yoga sequence being breath led, a typical yoga flow or sequence is designed to facilitate an inhale when the body opens and stretches and exhale as the body folds in. In addition to these structured sequences, the children in both schools were trained in specific breathing techniques that could be used either as part of a structured yoga class, and/or as short mindfulness or 'brain breaks.'

R: what do you do in these little breaks? Are these mindfulness breaks, or exercises, stretches? Can you give me an example?

PS2 CAYT: It's tapping the fingers, starting with the thumb, then moving across for a four-count inhale. On the exhale. They reverse the pattern, starting with the little finger. Or they place their hands on their tummies, feeling their breath rise and fall like a wave.

Both 'Starfish' breathing³ and 'Belly' breathing⁴ are referred to by PS2CAYT. Both techniques facilitate deeper, slower breathing that helps the body engage the parasympathetic nervous system to elicit a calming effect on participants. All three of the children's groups referred to both techniques, as did both yoga teachers.

PS1G2 CHILD: I like the finger one.

R: The finger one. Can you all remember the way the finger one went? What way did you use the breathing in the finger one?

PS1G2C1: You breathe in and you breathe out.

PS1G2C8: You breathe in on the way up to the top, and you exhale when you get to the bottom.

R: What's good about that?

PS1G2C6: It controls your breathing; it makes you feel more relaxed.

PS1G2C3: It helps you relax and calm down.

³ Starfish Breathing: Helping children with emotional regulation. Available at: <https://www.projectplaytherapy.com/starfish-breathing-helping-children-with-emotional-regulation/> [Accessed 23/06/23].

⁴ Mindful Breathing: Diaphragmatic or Belly Breathing. Available at: <https://www.choc.org/video/diaphragmatic-breathing/> [Accessed 23/06/23].

Group three give a similar response, a very animated, excited response, that is captured through the audio recording, though hard to grasp the emotional content in the written word.

PS1G3C5: We learned to do breathing exercises with our fingers, like the starfish – the finger breathing.

R: When can you use the finger breathing?

PS1G3C11: If you're really annoyed, say you're angry at your sister or brother, you just use that to calm yourself down.

R: How does that work PS1G3C11, could you take me through that?

The children all give a demonstration.

R: And what's a good thing about that one? Where can you take these? (Lift hands and wriggle fingers to students).

PS1G3C4: Anywhere, you just take them everywhere you go!

Group one described use of the Belly breath, Starfish, and the Hoberman Sphere⁵. This is an isokinetic sphere that is capable of folding down and then expanding which aids slow, controlled breathing.

PS1G1C7: When we did the breathing, we would sit down and then rise up, or she would put out all these little fidgets and what's it called?

PS1G1C13: The mega mesh or something? You know little thing with the marble inside of it (Hoberman Sphere).

PS1G1C7: And you could breathe in whenever it opened up, and breathe out when it closed.

R: Did that make it easier or harder?

PS1G1C7: It just made it feel normal. It didn't really make anything easier or harder for me, I just breathed or else I'd be dead!

PS1G1C10: It made you focus more. We learned how to use fidgets in different ways, it's more common to use them.

R: Did they calm you down?

⁵ Hoberman Sphere Breathing. Available at: <https://www.youtube.com/watch?v=YnNATiWYyx0> [Accessed 29/10/22].

PS1G1C10: Yeah, it really prepares you for class because it's normally in the morning. It calms you down for class.

PS1G1C2: It teaches you how to focus and not be all over the place.

There were several additional breathing techniques taught to the children though some were not as suitable for this image-conscious age group as explained by PS1G1C7.

Some of them that she taught us might be just a wee bit weird to do in a hall. Like the Snake Breath, it might be weird walking through the hall hissing.

Some of the emotions associated with the use of the breath during the yoga and the relaxation phases are described by PS1TYT.

I wish I had recorded their feedback, one said, "I feel like jelly," another, "I feel light like a cloud." I remember thinking, wow, it's really had a positive effect on them.

The children were also descriptive in their use of emotive language to express how they felt through the use of the breath.

PS1G1CHILD "Calm and warm"

PS1G1C13 "Relaxed and loose...calm, calming."

PS1G1C10 "You could focus on things a bit more, it felt good, it sort of made me feel like I could just float"

PS1G1C13: "The breathing's the one thing that really helps us is when we lay down at the end of the session, it seems like you just go into a happy place."

PS1G1C14: "Like all your worries just go away, you forget about those, they just go away."

The focused use of the breath in the structured yoga sessions and in the smaller brain breaks & relaxation sessions produced positive comments from both adult and child participants in the study. The need for scheduled down-time for the children can be seen in the interview with PS1P when discussing the relaxation sessions,

they absolutely adored it, I would have come into classrooms and chairs were tucked upside down and they were relaxing back on chairs, and they loved it.

In conclusion, through the response from the participants, the theme highlights the integral role of the breath in facilitating both the physical and mental benefits of yoga and mindfulness. The findings reveal that breathing techniques not only serve as a bridge between movement and mindfulness but also act as a powerful tool for stress and anxiety

management, emotional regulation, and improved focus. The participants' rich and emotive descriptions illustrate the profound impact of breathwork on their overall wellbeing.

Furthermore, the data, as in the literature, further highlights that the breath functions as a mechanism in fostering a calming shift in the autonomic nervous system, promoting a state of relaxation (Coulter 2004). Importantly, the breath transcends the confines of structured yoga sessions, equipping children with practical, portable strategies to navigate challenges in both academic and personal contexts. These findings reinforce the foundational significance of breath in yoga and mindfulness, not only as a physiological tool, but also as a means of fostering emotional resilience and mental clarity among primary school children. Thus, enhancing its effectiveness in promoting regulation and relaxation, and its positive impact on emotional well-being of the primary school children.

5.2.4 Theme 4: Faithful integration: navigating spiritual concerns in educational practices.

Positioned within the Macrosystem, this theme addresses some of the societal, religious, and cultural influences within the NI education system.

It highlights the importance of the need to find a balance between recognising the practical benefits of mindful yoga, some of which were highlighted in the previous theme, and respecting diverse faith and culture within the educational environment. It explores the complex intersection of faith, spirituality, and education in relation to the incorporation of yoga within NI primary schools. As a school principal and gatekeeper PS1P stresses the importance of her faith while also expressing an openness to exploring practices such as yoga, though she is conscious that this may not align directly with regional Christian beliefs.

I'm a churchgoer, and a Christian, and my faith is very important to me. But I see the benefits of Yoga in school from a practical, not spiritual perspective. I think there's still work to be done with Christian Churches around mindfulness...it's not about emptying your head, but about reflection. Christians have done that for years through prayer and silence. While many principals may want to uphold Christian values, it's not that simple anymore. We need a more rounded approach. Personally, I want my kids to think critically... not just follow what they're told, but to question it and make their own decisions.

PS1P identifies as a person very comfortable with her Christian faith, yet also comfortable with yoga and mindfulness; furthermore, she emphasises the need for change, and the empowerment of children through education on the subject material. PS2P concurs, an advocate of yoga, yet she is also aware of the existing issues that need addressing for yoga and mindfulness to gain acceptance.

Ultimately, everyone needs to feel that their Christian beliefs aren't being compromised and that they are comfortable with what's taught in school. To resolve this, we might need to call it something else... keeping the beneficial elements for body and minds but removing the spiritual 'faux pas' that suggests practicing Christians can't do yoga.

Both views relate not only to the personal views of the respondents, but also the views of the church, the staff, the parents and by association, the board of governors. This was reflected in the initial concerns that PS2P had in relation to the use of yoga, whereby she was aware of people's perceptions of yoga as a way of "praying to different gods" and/or "channelling your energy to the sun." She was conscious that the governors would be asking how the use of yoga related to the Christian ethos of the school, and how the practice of yoga would benefit the children. PS1P explains how her Board of Governors were very supportive of the work that happens in the school, thanks to a relationship that was cultivated over an eight-year period. Nevertheless, she urged caution:

That's not to say they don't challenge me on what goes on in school, and that's right, because that's the role that they have.

She gives an example of this in relation to the introduction of the teaching of Relationship and Sexuality Education (RSE) whereby they could not come to an agreement on how much conversations are opened up to the children in relation to lesbian, gay, bisexual, transgender, queer (or questioning) and others (LGBTQ+). Having had experience of teaching in both Scotland and England she admits that these are more difficult conversations "given the history of NI." Hence, a guarded approach initially in the introduction of yoga to the school, PS1P was not a yoga practitioner, she had taken part in Pilates classes and acknowledges the similarities between the two. However, she was enthusiastic about it being used with the children, though wary of the reaction of the parents.

Some of our parents who have a very strong Christian faith would have had their queries about it, and whether there was more to it than just the actual physical aspect of it, that was that was my only concern, it was how to ever answer parents.

Parental concerns were also voiced by PS2P, wherein she found that many of the parents did not agree with some of the perceived values attached to yoga. Her school has a strong Christian ethos, with these values held by many of the teachers. Indeed, on the initial mention of yoga some of the teachers voiced their worries. While acknowledging the concerns, she related that her own yoga training had no spiritual element to it, it was purely the physical poses, with a view of addressing health and wellbeing. Consequently, she sees it as part of her remit to make it very clear to both parents and teachers as to what exactly was going to be delivered to the children in her school, and that the delivery was very much in the form of a secular approach.

Evidence of the potential effects of interaction between the principal and teaching staff, and amongst teaching staff on this subject materialised through the interview with PS2CAYT. She refers to the changing views of one member of the teaching staff who had religious-based concerns in relation to the use of yoga in the primary school;

She's coming around... because the principal and other teachers are Christian, and she sees the benefits for the children. She can see it's not about religion; we're not going into philosophy or spirituality.

PS2CAYT refers to this concern as well, in that she sees the Board of Governors as being very supportive in the school,

They're very enthusiastic about it, very positive. They are just like saying, how do we get past the name 'yoga', because it has those connotations, those links.

This was also evident in her experience as an instructor in the fitness industry as when delivering her Pilates classes, she attempted to incorporate some yoga into them;

There was the religious element that came into what people were thinking. So, I had to tone it down a wee bit and make it more into a fusion of the two.

Toning down in this example meant not referring to the Sanskrit names of the yoga poses, nor referring to sequences such as Sun Salutations, as both have associations with both Buddhism and Hinduism. She addressed this issue by removing both the Sanskrit and the

yoga philosophy from her classes to focus purely on the physical poses. Interestingly she reflects on the rising acceptance of yoga by both the mainstream press and the medical profession as a credible form of exercise and physical therapy.

When introducing yoga in a previous school PS1TYT was advised to '*tread lightly*', she referred to taking part in exercise or stretches, as opposed to practicing yoga poses; she also avoided using the Sanskrit names of the poses, and the traditional greeting of namaste, which has its origins as a formal Hindu greeting. PS1P assents, in suggesting that there is,

There's still significant work to do in separating the spiritual side of yoga, from the actual practice. In school, we sit firmly on the practical side.

The terms spirituality and religion are used interchangeably throughout both the scoping questionnaire and the interviews, though PS1TYT is more definitive in her use of the term spirituality.

I see yoga as exercise... and spiritual in the sense that it connects me with myself and builds confidence. That's how I'd like others to see it; as something that's good for us.

She does not argue that yoga should be associated with any one religion, or that anyone's religious beliefs should be challenged through practicing yoga; however, she is aware of the confusion surrounding the area and can understand how people can be reluctant to engage in its practice. None-the-less, PS2CAYT believes that her yoga practice complements, and enhances her own religious convictions.

If you're true to your religion, I believe you can accept yoga for what it really is. It's not going to change your beliefs... it can actually help you become a better person and live your faith more fully.

In summary, this theme encapsulates the discussion around integrating practices such as yoga into educational settings while navigating concerns related to spirituality and religious beliefs. Although set in NI, it reflects the concerns experienced in the United States over the past twenty years (Douglass 2010; Butzer et al. 2016; Jennings 2016; Cook-Cottone et al. 2017; Cook-Cottone et al. 2019). Consequently, a more nuanced, secular approach is encouraged that separates the physical and mental benefits of yoga from its spiritual connotations (Childress and Cohen Harper 2015; Cook-Cottone 2017). In the theme that

follows an example is given of how potential barriers can be overcome via evidence of cooperation between the church and the school to facilitate the use of mindfulness and yoga within the classroom.

5.2.5 Theme 5 – Integrating mindful yoga into school curricula: Challenges and opportunities

Delivery of yoga in the two case study schools differed, as did the structure and mode of the yoga delivery, and the qualifications held by those who delivered yoga. Placed within the Exosystem, this theme addresses the broader social context as it links between several settings, such as the political, health, and education systems. The theme has four sub-themes.

5.2.5.1 The ripple effect of whole-school approaches to yoga implementation

This sub-theme encapsulates the idea that implementing yoga programs within schools involves not only those in the classroom; it permeates the entire school ecosystem, affecting staff, students, parents, and the school governors (Langille and Rodgers 2010; Golden and Earp 2012; Allen et al. 2016; Trach et al. 2018; Gonzales 2020). The two case study schools each benefit from having a member of staff with the skill set to deliver yoga, additionally, they each have a principal with positive views on the utilisation of yoga within their schools. Furthermore, they have the endorsement of the Board of Governors, the key gatekeepers, whose involvement confirmed both case study schools adopted a whole school approach. The whole school approach is reflected in the composition of the Board of Governors in that it is comprised of people from the Education Authority, the Church, the Principal, teachers, and parents (Appendix 14).

The importance of a whole school approach is emphasized by PS1P in that, *“It is always about getting people on board”*; however, PS1P recognises that although she has the power to implement new initiatives which staff are required to deliver, empowerment works best,

Unless they have some kind of ownership of that themselves, some kind of understanding that this isn't just another add-on coming through from the department, this is something that's actually going to benefit our children.

PS2P concurs in that she wants her staff to move along with her on the journey, whatever that journey is, should it be math, literacy, PE, or yoga. Though importantly,

Whatever the new initiative is, I would need to ensure that I had a whole staff buy in, that everybody was comfortable with that change, that they could see how it wasn't going to be additional to the curriculum.

There is the recognition from PS1P that change may be initiated both in the principal's office and/or, during structured staff development sessions. Nevertheless, any change has been seen to be further cemented during informal conversations among staff,

There's all the chat about that in the staff room, and the playground, and that it in itself sells it.

This comes across as a fluid process, an ongoing and developing conversation among the participants throughout the lifetime of any new initiative. Examples of this are apparent at a mesosystem level, whereby the various participants within the school ecosystem communicate on an informal level. PS1TYT reflects on feedback in relation to her introduction of mindful yoga to the classrooms, feedback through conversations with the Head of Year 7, and the other Year 7 teachers;

Honestly, I got such kind feedback, it made me really happy. Not every child will love yoga, but they all got involved, and their teachers were genuinely pleased.

PS2CAYT discusses similar comment between herself, other teachers, and the schoolchildren.

Teachers have said how receptive the children are, how included they feel, and how much more connected they are when they return to class. The children say they enjoy it and want to do it again... they come uplifted and ready to learn.

The flow of positivity from the school to the home environment was also described;

I think it benefits everyone... teachers, assistants, and children. It creates a positive energy in school, and that carries home. Children are showing parents what they've learned, and it's building stronger connections at home to.

PS2CAYT spoke from experience as a parent, classroom assistant, and yoga teacher. She reflected on how this positively affected the dynamic with the children, how the ripples

filtered out to the parents, and how this positivity was then carried back into the school through online platforms such as Seesaw⁶; subsequently, the positivity fed back to the Board of Governors. This ripple effect through the socioecological layers is further evidenced by PS1TYT after delivering a block of yoga sessions for the three Year 7 classes over a three-week period. The Year 7 teachers had volunteered to attend the sessions out of curiosity, with PS1P recalling that,

They loved it, and the children loved it. They couldn't say enough positively about the impact that those three sessions had.

Additionally, PS1P explains how PS1TYT received positive feedback through an online educational platform utilised by the school;

She's got lots of positive feedback from parents on Seesaw about the strategies she was using. It became a real highlight... something parents mentioned at the end of the year, and something the children looked forward to each day.

This generates further positivity in conversations throughout the school ecological system as the children talk amongst each other, with the word then reaching the parents, then ultimately feeding through to the Board of Governors. In conclusion, the ripple effect of positivity and engagement throughout the school ecosystem was described as contributing to a more supportive and connected school environment. The following sub-theme examines how this whole school approach is used to integrate yoga into both Physical Education (PE), and the broader school curriculum.

5.2.5.2 Amalgamation with existing curricula areas

The material from this sub-theme highlights the efforts to integrate yoga into other curriculum areas beyond Physical Education (PE), such as Personal Development and Mutual Understanding (PDMU) and The World Around Us. This further recognises the interconnection of physical and mental wellbeing with other aspects of learning (Toscano and Clemente 2008; Douglass 2010; Finnan 2015; Goodman et al. 2015).

⁶ Seesaw is an interactive online platform used by the primary Schools to facilitate student learning. Furthermore, it enables communication between students, teachers and parents. Full details can be accessed at: <https://help.seesaw.me/hc/en-us/articles/115003713306-What-is-Seesaw->

PS1P advocated for PE but described the recommended two hours per week as difficult to timetable in at times as there is pressure to prioritise subjects such as numeracy and literacy. However, as previously mentioned (5.2.1), the post-COVID-19 era has seen an increased interest placed on children's health and wellbeing. Consequently, there was more focus placed on physical activity in general, and particularly physical activities outdoors. To help accommodate this, the Parent Teacher Association assisted the school in purchasing two outdoor classrooms to facilitate more outdoor learning and physical activity in the outdoor environment. Furthermore, the school received a Pollinator Grant of twelve thousand pounds to complement the existing facilities,

to set up a big garden space, with the idea of being outside and being physically active as well as the actual curricular side of things (PS1P).

On a long-term basis PS1P envisages yoga fitting into both the PE and the Personal Development and Mutual Understanding (PDMU) curricula, and the after-schools programme. She sees yoga and mindfulness blending well with PDMU in that they address the children's social and emotional development. PS1TYT agrees and sees PE as the ideal curriculum area in which to deliver the yoga sessions, having said that, *"there are definitely aspects within PDMU"* that mirror the teachings in yoga and mindfulness.

PS2P has taken a similar approach to that in PS1 in that she has initially integrated yoga into the PE curriculum. There is also the recognition that although there is a post-COVID focus on the health and wellbeing of the children, from a department level, there is still an onus on prioritising literacy and numeracy. This is reflected in comments from PS2CAYT in that,

The principal is absolutely brilliant and she's all for including it, but it's just at the moment there's nowhere in the curriculum for it. So, what I've been doing is taking them for yoga in their PE slots.

She states that only one group will benefit from the 'structured' yoga classes though she has been able to integrate poses into other subject areas.

We can incorporate it into 'The World Around Us'. I take them outside, connect with nature, and use poses to represent things like flowers or trees. The poses can be adapted to any topic; we just rename them to suit what the children are learning.

In both schools yoga was initially introduced through PE, both yoga instructors are passionate in their delivery, and both principals were passionate in the need to deliver the allocated amount of PE to their pupils. PS2P denotes that,

Timetabling, is just our ultimate challenge, fitting everything on the NI curriculum into a very short day in primary school.

Therefore, it is important to recognise that not all primary schools feel that they can deliver the required two hours of PE per week, additionally, not all hold PE in such high regard. Asked if the schools that she has worked in all manage to deliver the recommended two hours PE per week PS2CAYT replied,

Not all the time, it all depends on the way the schools are run, they're just so busy and sometimes the lessons just have to run on, then unfortunately PE is sacrificed.

She explains that in her current school the children are all receiving a minimum of two hours of PE, though in her previous school this was not the case, *"Most definitely not. No, the previous school was not on board."* They had trouble accessing the sports hall as it was also used as a class and an exam hall, meaning PE was often replaced by the Daily Mile⁷.

The question was also asked of the two instructors, *"how do you compare yoga with PE and other modes of physical activity?"* PSTCAYT suggests that yoga takes pressure off the children,

Children now feel that everything is so competitive, that they have to reach a certain standard. With PE, with sports, it's all about, competition.

PS1TYT suggests that while all sport and PE have to some extent a positive impact on your wellbeing, yoga can lend more depth to this. There is ability to focus on emotional awareness through a fun story or affirmation at the start, then,

There is relaxation, meditation, and teaching them to believe in themselves and bring in affirmations, there's so many opportunities linked to yoga.

Both schools have integrated yoga into their primary curriculum, reflecting a growing recognition of the importance of holistic wellbeing, to both the physical and mental health

⁷ The Daily Mile is a school-based initiative that encourages children to run, jog, or walk for 15 minutes each day to improve physical health, mental wellbeing, and concentration <https://thedailymile.co.uk/about/>

among children. The views contribute to the answering of research question four in that they provide evidence of both opportunities, and potential barriers, that may impact any testable model for the future implementation of yoga in NI primary schools.

5.2.5.3 Adaptive integration: Yoga and mindfulness in the classroom

The previous sub-theme established potential subject areas within the curriculum where yoga may be effectively integrated, whereas, this sub-theme addresses both the mode of delivery, and the implementation of the components of a yoga class. It illustrates that the implementation of yoga and mindfulness is not restricted to 'traditional' structured in-person classes. Additional modes of delivery include online platforms, and shorter, more frequent 'brain breaks' that can be incorporated within all curriculum areas. Integration with mainstream curricula subjects is also evident in the form of storytelling, group activities, problem solving, and crafting, all directed towards the engagement of the children (Case-Smith et al. 2010; Chen and Pauwels 2014b; Feeney and Szczech Moser 2014; Butzer and LoRusso 2021)

Traditionally, adult yoga classes are 60 – 90 minutes in length and are compiled of three main components: 1. warm-up phase (centring and limbering), 2. main component (warming and strengthening), and 3. Cool-down phase (calming, breathing, and relaxation). In comparison, yoga for children does not follow a uniform template; while it remains structured around the three main components, each individual phase varies in both duration and content to suit the group's, age, ability, and needs. Furthermore, the mode of delivery varied, with case study interviews revealing that yoga was offered both in-person, and online. It was also delivered in different formats, including structured 30-45-minute classes, and shorter 5-10-minute 'brain breaks.'

Initially both case study schools introduced yoga via Cosmic Kids Yoga, a web-based platform that relies on the online presenter to deliver the content, meaning school personnel did not have to hold a formal yoga qualification. Cosmic Kids was introduced in PS2 post-COVID-19 as a means to address the mental health and wellbeing of the school children. Initially it was used by one of the Year 3 teachers, then rolled out to Years 1 to 4, with PS2P finding it to be effective in that *"we could all do it on the screen together, the teachers included"*, thus allowing teachers to both take part in the class and supervise the children.

PS1TYT denotes that this was very much targeted towards the Year 1 to Year 4 age groups in that,

Cosmic Kids yoga uses storytelling with poses, and I love that aspect. It's very animated, which suits the younger kids, and suits me, as I'm very animated too.

The younger children enjoyed the storytelling element as,

It works in their imagination. They get really excited, and involved, it's almost like an adventure.

Whereas with the Year 5 to Year 7 groups she works more with the Sun Salutation sequences, though uses group work, problem solving, and crafting to enhance enjoyment as she found that the children got bored with "traditional adult yoga." PS2CAYT found this approach useful as well, whereby, she used more traditional yoga 'flows', or Sun Salutations with the older groups, though found that she needed to make the sessions more fun-centred for the younger children,

It was all about having fun, getting into shapes, and incorporating games... so parents could try some of it at home too. It became a family thing.

PS1TYT referred to the mindful craftwork that was a part of some of the yoga and mindfulness sessions that she provided for the groups,

They loved the mindful crafts. I made meditation eye pillows with lavender oil; there was such a lovely atmosphere; everyone really enjoyed it.

The responses indicate that whilst the children enjoyed the active side of yoga, they also enjoyed their downtime. Prior to PS2CAYT being employed PS2 used an online programme called 'Neuronamo'. Having previously worked with pre-school children PS2CAYT observed that in nursery school the children had a designated area to go to unwind; however, once the children get into primary school, particularly once they get into P3-P4 and up, less time is given to them for time out and it is more about getting the task done. Through experience PS2CAYT can sense and see when concentration starts to lapse, whereby the focus is not on the task, and children become more fidgety; therefore, the task can't be completed because their minds are elsewhere.

They need something different, sometimes they just can't focus because their minds are overloaded. Even sitting still is too much, so I'll get them doing chair-

based yoga, tapping fingers, breathing in for four, breathing out for four, stretching, leaning over. Just simple movements to reset.

An example of this approach was observed by PS1P;

I saw lots of small things happen across classrooms, teachers taking time to help children relax, using basic yoga moves. I'd walk in and see pupils in unusual positions, lying over chairs, stretching on the floor...it was happening across Key Stage One.

This gives an example of the pliability of mindful yoga, of how breathwork (pranayama) in conjunction with some of the basic yoga poses, such as corpse pose, child's pose, legs up the wall, downward dog and mountain pose, were being effectively incorporated into curricular-based classes. The positive effects and feedback from those involved with the initial year groups, then led to further development throughout other year groups.

PS1P: P3 and P4 really caught the vision and ran with it, the kids loved it. They'd talk about it at the end of the day as their way to relax. For me, that marked the shift...from simple relaxation to more of a yoga-based practice in school.

PS1P's reference to the "fine line" between yoga and mindfulness is voiced by other respondents throughout the study. In yoga there is no separation between the two, the yoga poses are traditionally used not just for their physical benefits, but to also facilitate the use of the breath to enhance focus, concentration, and/or relaxation; hence the term 'mindful yoga'.

In reflecting on how yoga and mindfulness had been delivered in her school PS1P was conscious of the fact that PS1TYT was moving on to a new post and expressed her thoughts on how the expertise and enthusiasm that PS1TYT brought to the school could be replaced.

We've got a good foundation here with us already, and I think we can certainly bring that on. How do we do that without someone who has the experience and the driving passion to do that is a bigger challenge?

This sub-theme highlights the flexible and adaptive nature of school-based yoga and mindfulness, showing how delivery varied by age group, teacher confidence, and resource availability. While younger children responded well to online platforms such as Cosmic Kids Yoga, which teachers could facilitate without formal qualifications, older pupils benefited more from in-person, age-appropriate sequences that required greater skill and

adaptability. This distinction raises important considerations about the accessibility and scalability of yoga provision in schools, particularly the reliance on enthusiastic staff or external instructors. These issues of sustainability, and delivery model will be explored further in the discussion chapter, as will qualifications which is also discussed in the following sub-theme.

5.2.5.4 *Navigating qualifications and experience in school-based yoga instruction*

The views on the qualifications required to teach yoga differed across the interview participants. This sub-theme highlights the differences in qualifications held by the individual's teaching yoga to children, ranging from vocational yoga teaching certificates to academic primary school teaching qualifications. This variability raises questions about the perceived importance and hierarchy of qualifications in this context (Chen and Pauwels 2014b; Childress and Cohen Harper 2015; Cook-Cottone 2017).

PS2P made the point that prior to PS2CAYT being employed, it had been primarily the teachers running the yoga sessions, although,

They've mainly led it on screen, using Cosmic Kids Yoga in the hall. They're not trained themselves, just facilitating the video.

The quote highlights the fact that yoga had been delivered in both schools at some time without the need for qualified yoga instructors. However, both principals have emphasised that for the long-term development of a mindful yoga programme in their schools, they would require appropriately qualified staff to deliver them.

PSP1: I think the key going forward is how we replace the expertise that PS1TYT brought. Can we appoint someone with skills in mindfulness, yoga, or children's mental health? That would be a significant step forward for us.

PS1TYT is a qualified Primary School teacher with a Bachelor in Education degree (BEd), specialised in PE and has six years teaching experience. She initially took up yoga practice to enhance her strength and flexibility for hockey, building on this experience through yoga specific YouTube channels. As a PE specialist she then incorporated a little yoga into her

'normal' curricular PE sessions over a six-year period, before gaining an online yoga qualification.

I started using Cosmic Kids on YouTube as a brain break and later found out she offered teacher training... so that's where I trained. It wasn't expensive, all online, with a lot of theory but no final assessment, unlike other courses that cost thousands.

PS2CAYT comes from a different background, with almost twenty years' experience in the health and fitness industry. Her work with children spans a wide age range, from two to eighteen years old. She does not have an undergraduate degree; however, she is a qualified yoga teacher with a recognised 200-hour Yoga Teacher qualification. This course cost several thousand pounds and included both written exams and practical assessments. She also holds a second 200-hour qualification specifically in children's yoga, similarly rigorous in content, cost, and assessment.

These two case study participants present contrasting professional profiles, yet both are qualified to teach yoga in school settings. However, there was some uncertainty around how these qualifications are formally recognised as noted by PS1P,

PS1TYT is a Yogi...I don't even know the right terminology, sorry. A Yogi Master or something like that?

At the time of interview PS1TYT had attained a position in another school, meaning she was moving on at the end of the academic year. I asked PS1P if that would be yoga and mindfulness gone from the school now that PS1TYT was moving on?

Because it's embedded in end-of-day routines, we'd like to think it will continue.

The response indicated that mindful yoga had become a valuable component within timetabled classes, though none of the other members of staff were appropriately trained, as PS1P explains,

Staff would definitely need training. They've picked things up by osmosis from PS1TYT, but there hasn't been direct training on what to do with the children.

In summary, the findings highlight differences in qualifications held by the individual's teaching yoga.

5.3 Conclusion

This chapter presented five interconnected themes that explored how yoga was implemented and experienced within two NI primary schools. Using a socioecological lens, the findings highlighted the post-pandemic emphasis on mental health, the value of yoga for managing acute academic stress and transitions, and the central role of breathwork in promoting emotional regulation. While uptake was strong, particularly in younger year groups, challenges related to religious sensitivities, timetabling, and staff qualifications shaped how yoga was adapted and sustained. Importantly, the findings suggest that effective integration depends on whole-school support, flexibility in delivery, and a secular framing of yoga practices. These insights are further explored in the discussion chapter, with implications for policy, practice, and future research.

Chapter 6: Discussion

6.1 Introduction

This chapter critically discusses the findings from Chapters 4 and 5, using Bronfenbrenner's Bioecological Model, an evolution of his original Ecological Systems Theory (EST) that incorporates the PPCT framework as a central mechanism for understanding human development (Bronfenbrenner and Morris 2006). These models provide a conceptual lens to explore the multiple, interacting influences shaping the integration of yoga into NI primary schools.

The study employed a sequential mixed methods design, combining quantitative and qualitative approaches (Creswell and Clark 2017). Phase One, a scoping questionnaire, provided a broad overview of current yoga provision in schools, and identified perceived barriers and facilitators. Although primarily quantitative, open-ended responses revealed contextual issues, particularly around religion and spirituality, tensions that became a central focus in Phase Two.

Phase Two, comprising in-depth case study interviews, was shaped by these survey findings. This iterative design enabled more targeted qualitative enquiry (Ivankova et al. 2006), enriching data interpretation and allowing for a more nuanced exploration of the research questions (Cohen et al. 2011; Bryman 2016; Gray 2021).

The analysis in this chapter is structured around five core themes developed from the case study data. The Bioecological Model informed not only the analytical lens and overall study design, including the development of research questions and interview protocols. These frameworks help examine how individual, relational, organisational, and cultural factors interact to support or hinder yoga's use as a school-based wellbeing strategy. Table 6.1 maps each theme to the study's four research questions.

Table 6:1: Relationship between, research questions, themes, and sub-themes.

Phase Two: Case Study		
Themes & Sub-themes	Connection of themes to research questions (RQ)	(RQs)
<p>Theme 1: Prehabilitation: Prioritising mental wellness for productivity, learning and life</p>	<p>T1 with RQ1, RQ2, RQ3 & RQ4 Participants (RQ2) viewed health and well-being as essential foundations for learning, productivity, and life. Without this foundation, children may struggle to thrive. COVID-19 highlighted the urgent need for support systems that equip pupils to manage stress (RQ1 & RQ3), with clear implications for the design and mechanisms of a testable intervention model (RQ4).</p>	<p>RQ1: How is yoga currently being used in primary schools in NI?</p>
<p>Theme 2: Academic stress and coping strategies: The role of yoga and mindfulness.</p>	<p>T2 with RQ1, RQ2, RQ3 & RQ4 Participants discussed yoga and mindfulness as coping strategies used to support resilience and intelligence (RQ1-RQ3). These benefits extend beyond the transfer tests and transitions highlighting the need for a preventative, skills-based approach in future interventions (RQ4).</p>	<p>RQ2: What are the perspectives of key stakeholders: principals, teachers, pupils, and parents on the current & future use of yoga in Primary schools?</p>
<p>Theme 3: Breath as the anchor: The fundamental role of pranayama in mindful yoga.</p>	<p>T3 with RQ1, RQ2, RQ3 & RQ4 Breathwork was described as a psychophysiological anchor, strongly linked to self-regulation, and enhanced focus (RQ1-RQ3). Its central role in both physical postures and mindful meditation was emphasised (RQ4).</p>	<p>RQ3: Can yoga be effectively integrated within the NI curriculum?</p>
<p>Theme 4: Faithful integration: Navigating spiritual concerns in educational practices.</p>	<p>T4 with RQ1, RQ2, RQ3 & RQ4 The theme explores concerns about the spiritual aspects of yoga, particularly among those with strong Christian beliefs (RQ2). Participants described how such concerns are currently managed (RQ1 & RQ3), and emphasised the need for a nuanced, secular framing of yoga's benefits in future implementation (RQ4).</p>	<p>RQ4: What would a testable model (and appropriate theory of change) for the implementation of a yoga intervention in NI schools look like?</p>
<p>Theme 5: Integrating mindful yoga into the school curricula: Challenges and opportunities.</p>	<p>T5 with RQ1, RQ2, RQ3 & RQ4 This theme highlights the complexities of implementing yoga in the case study schools (RQ1 & RQ3), including the need for whole-school buy-in and staff empowerment (RQ2). It also addresses efforts to embed yoga PE and discuss the variability and perceived hierarchy of teaching qualifications (RQ4).</p>	

Alongside this theoretical interpretation, the chapter engages with wider academic literature to situate findings within current debates around social and emotional wellbeing, mental health policy, and contemplative practices in schools. The discussion proceeds through the ecological model's nested layers, beginning at the individual and interpersonal levels, and progressing through organisational, community, and macro-level considerations.

Given my longstanding engagement with yoga, it is important to make explicit how reflexivity shaped interpretation throughout this chapter.

6.1.1 Reflexive positioning

This doctoral research has unfolded not only as an academic inquiry but as a personal journey, shaped by evolving positionalities, moments of self-doubt, and a continuous process of reflexive learning. As a long-standing yoga practitioner and educator, my entry into this research was marked by a deep commitment to the practice and its potential for supporting wellbeing. However, I was also aware of the danger that Delamont et al. (2010) describe as "fighting familiarity", the tendency for researchers too close to their subject to risk overlooking the taken-for-granted. Consciously countering this required adopting strategies to remain critically alert through; resisting assumptions, challenging my preconceptions, and crucially, with insightful guidance of two diligent supervisors, actively engaging with perspectives that contrasted with my own.

Throughout the data collection and analysis phases, maintaining critical distance was both a methodological imperative and a personal challenge. Engaging with religious objections to yoga, or encountering resistance from school leaders, required me to reflect not only on the content of those views but also on my own emotional responses to them. At times, this generated discomfort and uncertainty, yet these were essential points of growth. It became clear that the process of reflexivity was not confined to the margins of the research journal but embedded in the very fabric of decision making, interpretation, and meaning making. I came to understand that reflexivity not as a moment, but as a practice; ongoing, uncomfortable, and vital.

The iterative nature of the research design, particularly the transition from questionnaire to case study, helped reinforce a commitment to responsiveness and contextual sensitivity.

This meant relinquishing control over a fixed methodological path and instead, allowing the voices of participants to shape the emerging direction. It also meant embracing a certain vulnerability in acknowledging the limits of my expertise and recognising the weight of participants' trust in sharing their experiences and insights.

Imposter syndrome has been a frequent, if silent, companion throughout the doctoral process, surfacing most often in moments of isolation, deadlines, or supervisory meetings. While common in doctoral study (Sverdlik et al. 2020), its presence has at times cast doubt on the legitimacy of my voice, and the worth of my contributions. Yet it also functioned as an internal accountability, reinforcing the responsibility to proceed with rigor, integrity, and reflexive humility in interpreting and representing participants accounts.

6.1.2 Temporal Context

The COVID-19 pandemic represents a defining chrono-macrosystemic event in Bronfenbrenner's ecological framework, triggering macro-level policy changes and public discourse while also acting as a catalyst for educational reform. It influenced national health policy, educational funding, and cultural perceptions of wellbeing. As a chronosystemic event, it disrupted children's developmental trajectories, intensified inequalities, and shifted schools' mental health priorities.

Although children's emotional wellbeing has long been a concern in NI, where mental health challenges are disproportionately high (Bunting et al. 2022; Purdy et al. 2022; Fitzpatrick et al. 2023; Cassidy 2024), the pandemic exacerbated these issues. It widened socioeconomic disparities and increased psychological distress, especially among disadvantaged pupils (Marmot et al. 2020b; Busse et al. 2022; Moore et al. 2022). The interviews, conducted in mid-2022, occurred during schools' recovery from pandemic-related disruptions, a period when wellbeing initiatives were seen as essential.

This intersection of time and structure created a window for adopting preventative interventions like yoga, which became part of broader recovery strategies. Participants described yoga as cost effective and adaptable for managing stress and anxiety. Its uptake reflects broader policy shifts, including the *Mental Health Strategy 2021-2031* (Department of Health NI 2021) and the *Children and Young People's Emotional Health and Wellbeing in*

Education Framework (DENI 2021a), both of which prioritise early intervention and school-based support. These frameworks illustrate how macrosystemic priorities have shifted over time, in response to both structural concerns and the cumulative impact of chronosystemic stressors.

However, macro-level influences extend beyond health policy. Integrating yoga into NI schools also reflects cultural and religious debates about contemplative practices in public education (Douglass 2010; Cook-Cottone et al. 2017; Huynh 2021). Both schools emphasised the importance of cultural sensitivity to navigate parental resistance. This aligns with research suggesting that yoga's perceived spirituality can be a concern in Christian communities (Douglass 2010; Cook-Cottone et al. 2019). Yoga was seen not just as a wellbeing tool but as a means of fostering shared values across the school community (World Health Organisation 2023).

Religion remains a powerful force in NI. Between 2001 and 2011, religious affiliation declined by 10% in England, Scotland, and Wales, but only a 3% in NI (Hayward and McManus 2020). This persistence of religious identity underlines the importance of regional sensitivity. While many European countries have embraced secular education, NI's socio-political and religious narratives continue to shape educational practices (Walsh 2022).

Within a socio-ecological framework, religion operates across multiple domains, individual, interpersonal, and macrosystemic, shaping beliefs, relationships and policy (McLeroy 1988; Tudge et al. 2016). In NI, religious identity intersects with cultural affiliation and political history, making resistance to yoga more than a theological concern, it reflects deeper cultural tensions (Walsh 2022). Culture, in developmental theory, is a dynamic system of shared meaning embedded in schools, families, and communities (Caperon et al. 2022). Shaped by history and enacted through interaction, it determines what is viewed as normative (Burns et al. 2015; Vélez-Agosto et al. 2017). Implementing yoga required more than curricular integration, it demanded relational sensitivity, cultural adaptability, and awareness of the sociohistorical context in which schools operate.

Overall yoga's integration into NI schools must be understood through a temporal-macrosystemic lens, where health policies, cultural values, and societal shifts intersect. COVID-19 accelerated, mental health prioritising, creating opportunities for interventions

such as yoga. Yet, sustained success depends on navigating enduring macrosystemic factors, including religious identity, policy environments, and sociocultural expectations.

6.1.3 The individual: Empowering emotional and physical wellbeing

At the foundation of EST is the individual, and it is at the individual level where experiences with yoga and mindfulness practices indicate potential for emotional and physical health benefits (Purohit et al. 2016; Park and Slattery 2021). The case study findings demonstrate how children in the case study schools utilise breathing techniques such as ‘starfish breathing’, and structured breathing in movement through ‘sun salutations’ to help manage stress and anxiety. These practices are identified by both children and their teachers as particularly valuable in coping with academic pressures, including transfer tests, and transitions from primary to secondary school. The findings align with research indicating that breath awareness enhances self-regulation, supporting children in navigating challenges with greater confidence and composure (Rashedi et al. 2019).

The findings suggest that yoga may offer potential benefits beyond physical activity by equipping children with tools that support emotional regulation and stress management. When thoughtfully implemented, it may serve a preventative function by enhancing children’s capacity to withstand future stressors (Banugo and Amoako 2017). Some participants described how the use of affirmations and moments of mastery within sessions helped nurture a sense of self-efficacy, reinforcing their belief in their ability to manage difficult situations (Bandura 1982; Kjærvik and Bushman 2024). Rather than reacting to emotional distress, these practices were described as promoting a more proactive and constructive approach to coping with stress, including anxiety, frustration, and performance pressure.

No participants reported adverse effects from engaging in yoga or mindfulness activities, though careful implementation and monitoring were consistently emphasised by staff. While participants predominantly described positive outcomes, it is important to acknowledge the wider evidence base that highlights the potential for unintended harm in school-based mental health interventions. Guzman-Holst et al. (2024), in a scoping review of 112 interventions, found that nearly 9% reported at least one negative outcome, including

decreased wellbeing and increased anxiety or depression. These effects were commonly observed in high-risk groups such as younger children, boys, and those from socioeconomically disadvantaged backgrounds. The authors emphasised that in many cases, the content of the intervention itself may have contributed to these outcomes. These findings highlight the importance of cautious, developmentally appropriate implementation and robust monitoring to ensure that mindfulness-based approaches support, rather than undermine, children's wellbeing (Durlak et al. 2022; Kuyken et al. 2022).

Despite the need for careful implementation, the case study findings also suggest that yoga practices can extend beyond the classroom setting in meaningful ways. The integration of mindful yoga beyond the classroom, described as "*taking yoga off the mat*" demonstrates its universal applicability (Taylor et al. 2019, p. 5). Children in the case study reported using breath-based techniques in extracurricular activities, transitions, and moments of uncertainty, highlighting yoga's role as a cost-effective self-regulation tool (Childress and Cohen Harper 2015; Cook-Cottone 2017; Taylor et al. 2019). This highlights yoga's potential as a lifelong resource, supporting emotional wellbeing, focus, and confidence in diverse real-world settings.

However, Kuyken et al. (2022) identified cost effectiveness as a concern, noting a disconnect between economic models and the actual impact of the intervention on intended psychological outcomes. This calls into question the practical value of some individual-level interventions in resource-limited educational settings. The case study also revealed limitations in the extent to which yoga can address all forms of stress and anxiety in children. While it was perceived by some as providing an effective coping mechanism, external factors such as family stress, peer pressure, and socioeconomic disparities may still impact children's overall wellbeing in ways that cannot fully be addressed through improving individual coping mechanisms (Purdy et al. 2022).

6.1.4 Strengthening supportive relationships at the interpersonal level

There is a broad consensus on the importance of intentionally cultivating intrapersonal abilities and traits, such as self-awareness and self-regulation, alongside interpersonal skills and attitudes, such as social awareness and relationship building capabilities (Durlak et al.

2022). Interpersonal relationships among teachers, students, and parents were described as playing a critical role in the success of yoga and mindfulness initiatives, with teachers acting as facilitators, creating inclusive environments that encourage participation and engagement (Butzer et al. 2015a). The findings demonstrated the influence of teachers, parents, and peers on the acceptance and implementation of yoga within schools. For example, in the case study schools, incorporating mindful yoga into classroom activities through both group exercises and “brain breaks” was thought to foster collaborative learning and mutual support. Parental involvement was also highlighted, with positive feedback on online platforms such as Seesaw indicating growth in acceptance of these practices and demonstrating the importance of communication between school staff and parents (See Section 5.3).

However, the resistance from some parents, particularly those with strong Christian beliefs, highlight the challenges in integrating yoga into school settings (See Table 4.2 and Section 5.2). This reflects concerns voiced in the literature as illustrated by the following comment:

My understanding of yoga is that you can't separate religion out of it. If you introduce a child to this at a young, vulnerable age, you could cause them to want to practice it later. If it's kind of a Hindu cult-like thing, I don't want my child exposed to that. (Douglass 2010, p. 166)

The findings from Phases One and Two of the current study revealed that some educators adapted their language to avoid terminology associated with Eastern spirituality, instead focusing on the secular benefits of yoga, such as relaxation, self-regulation, and physical wellbeing. Nevertheless, despite these adaptations some respondents remained resistant, suggesting that reframing yoga as secular may not always be sufficient in overcoming religious objections. This tension between secularism and fidelity is explored in greater depth in Section 6.2.1.6.

In light of these ongoing concerns, rather than concealing the nature of yoga or disregarding parental objections, Douglass (2010) recommends using such resistance as a valuable entry point for dialogue. She argues that engaging with these different viewpoints can open opportunities to explore broader educational themes, including diversity, democratic values, and the importance of critical thinking in addressing contested issues within school settings. Herlitz et al. (2020) note that interventions which engage and receive support from parents

and the community tend to be more effective and sustainable, whereas insufficient parental support can diminish staff motivation and hinder the longevity of such programmes.

These insights echo broader discussions in the literature on the importance of contextualised approaches to implementing wellbeing interventions in schools. Rather than applying one-size-fits-all programmes, successful implementation often depends on aligning initiatives with the unique cultural, religious, and social dynamics of each school community (Jennings 2016; Cook-Cottone et al. 2019). As the case study illustrates, efforts to adopt language and delivery methods can help to increase acceptance, but long-term sustainability is more likely when schools foster open communication, respect for diverse perspectives, and active collaboration with families (Day et al. 2019). This highlights the need for a flexible, inclusive, and context-sensitive approach to integrating yoga and mindfulness practices in educational settings.

6.1.5 Leadership, adaptation, and collaboration at organisational and community levels

The case study data revealed that at the organisational level, school leadership and governance emerged as pivotal forces in the integration of yoga and mindfulness into the curriculum. Principals and boards of governors demonstrated proactive approaches by navigating cultural sensitivities while prioritising mental health alongside academic achievement (See Section 5.3). These findings are consistent with March et al. (2022) and Herlitz et al. (2020), who highlight the critical influence of leadership support in the successful adoption and sustainability of school-based wellbeing interventions.

This was particularly evident in the post-COVID-19 context, where school development plans prioritised literacy and numeracy recovery, yet leadership in both case study schools also recognised the urgent need to address heightened student stress and anxiety (Casey and McLaughlin 2022; Cassidy 2024). Both schools adapted their curricula to include yoga, integrating it into Physical Education (PE) and Personal Development and Mutual Understanding (PDMU) lessons to address children's social and emotional development. Both principals recognised the critical importance of mental health and wellbeing as a foundation for effective learning, emphasising that emotional stability was essential for student engagement and productivity. In response to the ongoing impact of the pandemic,

both highlighted the need for targeted interventions to support students in managing mental health challenges and addressing heightened anxiety and overactive thought patterns.

However, the data also point to a more complex dynamic in that some of the emotional challenges yoga seeks to alleviate are shaped or exacerbated by the very structure and priorities of the school system. Organisational and policy-level demands, including academic selection, performance pressures, and transitions, were cited by staff and pupils as core sources of stress. In this way, the organisational context not only enables wellbeing interventions but also generates the conditions that makes them necessary. This tension is reflected in critiques of school-based mental health approaches that overly emphasise individual coping without addressing the structural roots of stress (Haataja et al. 2025).

Banerjee et al. (2016) concur in that they emphasise the importance of planning and tracking how school systems connect learning, behaviour, and wellbeing to ensure emotional health efforts align with other academic priorities. These efforts reflect an understanding of the critical role of systemic leadership in fostering a supportive environment for student wellbeing. For example, one of the two case study schools successfully secured a grant from a church-based organisation to fund mental health initiatives, illustrating the value of collaboration between governance structures and external partners. This was seen as important not only for sustaining interventions financially, but also for supporting their broader implementation, including capacity building, resource allocation, and embedding initiatives within school culture and operational priorities (Childress and Cohen Harper 2015).

As also mentioned by Herlitz et al. (2020), the commitment and active involvement of principals and senior leadership is essential for sustaining school wellbeing initiatives. In the case study schools, this commitment was evident in their broader prioritisation of student mental health and wellbeing within post-pandemic recovery strategies. This included tangible actions such as securing external funding and embedding yoga into operational priorities. Similarly, March et al. (2022) caution that without clear communication and leadership buy-in, such interventions risk being deprioritised or misunderstood among staff.

At the community level, the cultural and religious context of NI posed unique challenges to the implementation of yoga and mindfulness. Concerns regarding the spiritual connotations of yoga, particularly its perceived association with Eastern religious traditions, necessitated careful adaptation to align the practice with cultural and religious norms (Douglass 2007). Educators avoided the use of Sanskrit terminology and emphasised secular values, thus helping to bridge cultural divides and frame yoga as a practical tool for wellbeing as opposed to a religious practice (Cook-Cottone et al. 2019).

While these adaptations proved effective in the case study schools, their relevance may be especially pertinent in the Northern Irish context, where religion continues to play a role in public discourse, school governance, and cultural identity (Hayward and McManus 2020; Walsh 2022). This enduring religiosity stands in contrast to more secular European regions such as Scandinavia, where religious affiliation and belief in God are significantly lower (Zuckerman 2008; Lemos and Puga-Gonzalez 2021). This comparison underlines the importance of regional sensitivity when implementing wellbeing practices in schools, as cultural and religious norms may shape how such interventions are received and understood (Cook-Cottone et al. 2017; Cook-Cottone et al. 2019).

However, within a socio-ecological framework, the positioning of religion exclusively at the community level may risk overlooking its more diffuse and layered presence in people's lives (McLeroy 1988; Tudge et al. 2016). Religious identity often straddles multiple levels, experienced individually through belief and practice, shaped interpersonally within families, and enacted within broader cultural and political contexts. In NI for example, religious affiliation intersects with socio-political narratives, meaning that its significance cannot be understood solely in spiritual or communal terms (Walsh 2022). This highlights the need for a flexible and context-sensitive application of EST. One that recognises how constructs such as religion can operate simultaneously across domains and carry different meanings depending on their historical and cultural positioning.

This layered understanding of religion connects closely with broader interpretations of culture in developmental theory. Culture plays a central role in structuring the microsystems where development unfolds. It is not a fixed backdrop but an evolving system of shared practices embedded in the daily routines of families, schools, and neighbourhoods (Caperon et al. 2022). These practices are given meaning through language and interaction, and are

shaped by the symbolic tools, signs, and historical narratives inherited from previous generations (Burns et al. 2015). As such, cultural diversity is not an external consideration but a constitutive feature of children's developmental environments, influencing what is viewed as normative or desirable in terms of behaviour and outcomes (Vélez-Agosto et al. 2017).

Taken together, these perspectives focus the importance of interpreting religion and culture not as static categories mapped neatly onto a single level of EST, but as fluid, multi-layered forces that shape how wellbeing interventions are understood, received, and enacted. In contexts such as NI, where cultural identity carries political as well as personal significance, efforts to implement school-based wellbeing must be attentive to these intersecting meanings. Cultural adaptation, therefore, is not merely a practical adjustment but a relational and interpretive process that acknowledges the lived complexity of children's microsystems (Bronfenbrenner and Morris 2006).

6.1.6 Synthesis and overview of the emerging model

Taken together, the findings illuminate how yoga and mindfulness practices may have the potential to enhance wellbeing through a dynamic interplay of individual agency, supportive relationships, and responsive school systems. Within Bronfenbrenner's PPCT framework, these proximal processes, structured sessions, teacher-pupil interactions, and home-school collaborations are embedded within layered contexts shaped by culture, religion, and time. The insights lay the foundation for an emerging theory of change for school-based yoga interventions in NI.

This theory recognises self-regulation, encompassing emotional, behavioural, and cognitive domains, as the central mechanism through which mindful yoga may enhance social and emotional wellbeing. While emotional regulation was most prominently referenced in participant accounts, practices such as breath control, focused movement, and present moment awareness, also support broader executive functioning, including attention, impulse control, and cognitive flexibility (Diamond and Lee 2011; Gothe et al. 2019). These capacities are particularly relevant in the context of primary education, where the development of self-regulatory skills underpins both learning and social interaction. The

intervention's core components, breath awareness, yoga postures, and guided mindfulness practices, align with mechanisms shown to support these outcomes (Mendelson et al. 2010; Feagans Gould et al. 2014; Gould et al. 2016). However, their success is contingent on context-sensitive application, adapted to the school's cultural norms, leadership values, and wider community setting.

Importantly, the theory of change does not rest solely on what is delivered (the content), but how it is delivered, through compassionate modelling, relationship building, and integration into existing school frameworks. These 'core processes' help ensure that mindful yoga functions not merely as a standalone practice, but as a relational and systemic intervention capable of fostering whole-school wellbeing.

Critically, while the intervention may act most directly at the individual or classroom level, the findings suggest that meaningful and sustained implementation depends on engagement across all socioecological layers. Even where evidence indicates efficacy, real-world impact requires attention to the organisational, cultural, and policy conditions that enable implementation at scale (Goldberg et al. 2019). The implications for this emerging theory, including systemic conditions required for it to function effectively, will be further articulated in the development of a testable model.

To support interpretation of the subsequent discussion, Table 6.2 provides a simplified summary of the emerging yoga intervention model developed through this study. It distinguishes between:

- Core components: the key elements of what is delivered (e.g., breathwork, movement)
- Core processes: how delivery is enacted (e.g., compassionate modelling, routine integration)
- Intended functions: the capacities or outcomes the intervention aims to support (e.g., self-regulation, resilience, school culture).

This conceptual structure supports the theory of change presented later in Section 6.2.5 (see Figure 6.1) and should be held in mind as each research question is examined through a socioecological lens.

Table 6:2: Core components, processes, and intended functions of the proposed school-based yoga intervention

Core Components	Core Processes	Intended Functions
Breath awareness	Compassionate modelling	Self-regulation
Mindful movement & postures	Integration into daily school routines	Emotional resilience
Stillness & affirmations	Relationship building	Improved attention, behaviour, & classroom engagement
Cultural adaptation	Ongoing formative modelling	Whole-school wellbeing culture
Age-appropriate sequencing	Staff training & delivery consistency	Strengthened teacher-pupil & school-family ties

6.2 Findings relating to the research questions and their implications for any future school-based yoga intervention

To guide this investigation, the following research questions are addressed:

1. How is yoga currently being used in primary schools in NI?
2. What are the perspectives of key stakeholders, including principals, teachers, pupils, and parents, on the current and potential future use of yoga in Primary schools?
3. Can yoga be effectively integrated within the curriculum in schools in NI?
4. What would a testable model (and theory of change) for the implementation of a yoga intervention in NI schools look like?

6.2.1 RQ1: How is yoga currently being used in primary schools in NI?

6.2.1.1 Components and mode of delivery, an overview

Modifications to yoga delivery are frequently implemented to align with the needs of specific age groups or ability levels (Goldberg 2016). This distinction was evident in both the responses from the scoping questionnaire and the case study interviews.

Findings from the two case study schools reveal that yoga was implemented through four primary modes, each tailored to suit different age groups and educational settings. For older pupils, a full 30–60-minute structured class was delivered (Appendix 1), while for younger year groups engaged in shorter, themed class lasting 20-45 minutes (Appendix 15). Additionally, mindful yoga was integrated into academic classrooms through 5-15-minute tailored sessions (Appendix 16) and further supported by standalone mindfulness activities (Appendix 17). This flexible delivery model illustrates the adaptability of yoga across diverse educational contexts.

Furthermore, three schools involved in the scoping questionnaire reported delivering yoga-based practices for daily relaxation in short ten-minute sessions, two to five times per day. These were incorporated as movement breaks, calm down strategies, class regulation tools, brain breaks and sensory movement interventions. This mirrors the approach by Douglass (2010), in which *'time-in'* was used as an alternative to traditional behaviour management strategies. During these sessions, students were invited to close their eyes and reflect on their thoughts, helping them to regulate their emotions and re-engage with classroom learning.

These findings align with those reported by Butzer et al. (2016) and Khalsa and Butzer (2016), who similarly highlight a high degree of variability in the delivery of school-based yoga programmes, shaped by pupil age, aptitude, and school context. This variation, as Hawe et al. (2004) argue, is not inherently problematic. In fact, when the function and process of an intervention, rather than its specific components are preserved, adaptation can enhance contextual relevance and overall effectiveness. In this light, flexible approaches to yoga delivery may be beneficial where they uphold the core aims of the intervention, such as supporting self-regulation, emotional awareness, and classroom readiness. However, Hawe et al. (2004) also caution that excessive, or unstructured variation can compromise intervention integrity if the essential mechanisms of change are lost. These findings highlight the importance of defining yoga-based interventions by their underlying functions, ensuring that any adaptations remain theoretically grounded and capable of achieving their intended outcomes within diverse school environments.

The following examples illustrate how variability in delivery may either enhance or undermine the functional integrity of school-based yoga, depending how closely

adaptations align with the intervention's core theoretical principles, as initially outlined in the previous section.

In one case study school from the current study, a shortened 15-minute classroom-based yoga session was introduced daily to accommodate a busy timetable. While this adaptation removed some physical postures, it retained what might be hypothesised (on the basis of this study's emerging theory of change), as the core functions of the intervention, namely breath regulation, attention training, and emotional awareness. These mechanisms have been associated with self-regulation and classroom readiness in previous research (Zaccaro et al. 2018; Fincham et al. 2023). While such interpretations remain provisional, the current data suggest that this approach preserved the theoretical intent of the intervention despite its abbreviated form.

By contrast, one might envisage a scenario in which yoga is introduced purely as a physical activity during PE, with limited or no integration of breathwork, mindfulness, or reflective practice. Although labelled 'yoga', such a version might focus almost exclusively on stretching and aerobic movement, omitting the self-regulatory and emotional components considered essential within this study's emerging model. In this hypothetical case, the form may be retained but the function diluted, risking the loss of the programmes intended benefits. This contrast highlights the importance of distinguishing between surface level content and the underlying mechanisms of change (Hawe et al. 2004).

A third example highlights constructive variability in delivery. In one case study school, yoga sessions for neurodivergent pupils were adapted to include sensory activities (making lavender socks, or using weighted blankets), alongside modified postures and calming breath practices. These sessions also retained teacher led reflection and prioritised emotional safety (Hart et al. 2022; Hart et al. 2024). While these adaptations were not explicitly framed by the school as part of a theory-informed intervention, they can be interpreted (through the lens of this study's emerging theory of change) as preserving key functions of the programme. Specifically, they appeared to support emotional regulation and nurture a sense of internal and external safety, capacities considered central to the intervention's intended outcomes. This example highlights the potential for flexible, needs-led adaptations to maintain functional fidelity even when delivery differs structurally across classrooms.

6.2.1.2 Year groups and frequency of delivery

As noted in Chapter Four, of the ninety-three schools that fully completed the scoping questionnaire, twenty-four (25.8%) offered yoga to their students. There was a considerable variation in the frequency of yoga sessions provided per group of children throughout the academic year (see Table 4.6). These sessions ranged from one to two per week, to two to three sessions annually, with the most common approach being six to twelve sessions annually (43.5%), aligned with the academic calendar. Yoga was delivered across various primary year groups (see Tables 4.3 and 4.4), with eight schools (33.3%) offering it to all primary year groups (Years 1-7). Nineteen (79%) schools delivered yoga to multiple year groups, reflecting a broad reach across all twenty-four institutions and suggesting that yoga is widely perceived as beneficial across all primary levels. A comparable approach can be observed in school-based yoga programmes in the United States, Butzer et al. (2015b) identified thirty-six programmes in more than 940 schools with 75% offering yoga from kindergarten (Year 1) to K12 (Upper 6th/A Levels). This covers age groups 5 through to 18.

In Durlak et al.'s (2022) meta-analysis age was one of the few factors examined consistently with 11 out of 12 studies assessing it as a potential moderator. Although the overall findings were mixed, five meta-analyses found that age significantly influenced five of eight outcomes, all showing greater benefits for younger students. In contrast, the remaining six meta-analyses found no significant effect on age across the 23 outcomes they assessed. This variation in findings notwithstanding, the pattern of younger children benefiting more is reflected in the current study's data. Responses from the scoping questionnaire and the case study interviews demonstrate a notable concentration of yoga delivery in Years 1, 2, and 3, (62%), indicating a focus on younger age groups (ages 5 through to 8).

This aligns with evidence suggesting that interventions targeting younger children are arguably the most effective (Sheard et al. 2013). In contrast Montero-Marin et al. (2022) suggest that school-based mindfulness training may not be suitable for younger adolescents due to their limited ability to learn and apply mindfulness skills, which require substantial metacognitive ability. Further to this they suggest that adolescents may also face difficulty in self-regulating their behaviour when confronted with challenging emotions or thoughts (Montero-Marin et al. 2022).

That said, research in child development consistently highlights the early years as a critical period for establishing foundational skills in emotional regulation, attention, and behaviour (Center on the Developing Child 2010). Intervening early capitalises on a developmental window when children are particularly responsive to learning new self-regulation strategies, with evidence suggesting that early experiences shape the architecture of the developing brain in ways that impact long-term emotional and cognitive functioning (Shonkoff et al. 2012). In the context of mindful yoga, this focus may stem from the developmental benefits for early childhood, including improved focus, emotional regulation, and social skill development (Toscano and Clemente 2008; Noggle et al. 2012; Yaffa and Yaffa 2016).

This tallies with the focus of Theme 1 in the previous chapter, which implies that a child's ability to learn and thrive in school is significantly influenced by their mental and emotional state. It highlights the importance of proactive interventions that help children manage stress and anxiety, ultimately enhancing their well-being and their ability to achieve their potential both in education and in life. Taylor et al. (2019, p. 2) reinforce this idea, stating:

The discipline of yoga can reduce the impact of significant stressors and mitigate trauma by teaching children to relax, self-regulate, and remain present . . . and build a foundation for lifelong healthy habits.

However, as noted in section 5.3.4, this focus on younger age groups may partly be attributed to the easy accessibility of the online yoga platforms, which are particularly suited to these age groups. Additionally, the delivery of yoga without the need for a qualified instructor to be present in the classroom may have contributed to its prevalence in these settings. Participant response would suggest that the lesser emphasis on composite classes (16.7%) may reflect the challenges of teaching yoga to mixed age groups, which often requires specific adjustments to accommodate varying developmental needs and learning abilities (Goldberg 2016; Cook-Cottone 2017).

Although yoga is most often delivered to younger year groups, this contrasts with the qualitative data, which highlights stressors like academic selection and transition more relevant to older pupils. This discrepancy may reflect the composition of the interview sample, which focused on Key Stage 2 pupils, and thus captured stress-related themes relevant to their age group. However, it may also suggest a need for future research to engage younger children directly, to better understand their experiences of yoga and how it

supports their emerging self-regulatory skills. Such work would provide a more comprehensive view of the intervention's developmental relevance across the primary school spectrum.

That said, yoga's impact may diminish as children enter adolescence, where heightened emotions, peer influence, and identity development may reduce the effectiveness of simple breath, or posture-based strategies. As Montero-Marin et al. (2022) suggest, adolescents may require more metacognitive scaffolding to benefit from contemplative practices. Future research might therefore consider whether adaptations to delivery, such as greater emphasis on cognitive reflection, social connection, or peer-led formats, could enhance the relevance and impact of yoga for older pupils. Emerging evidence from secondary school settings suggests that, developmentally tailored, yoga interventions may support adolescents' emotional regulation, reduce anxiety, and promote wellbeing (Khalsa et al. 2012; Felver et al. 2016; Felver et al. 2020). To this end, any future intervention model should include age-appropriate sequencing and differentiated content, ensuring that delivery is developmentally matched to pupils' cognitive, emotional, and social needs.

6.2.1.3 Instructor Qualifications

The data from Phase One, the scoping questionnaire, revealed a varied landscape in terms of formal certification and delivery methods among those delivering yoga across the twenty-four primary schools. While nearly half of the instructors were reported to hold a yoga qualification, the majority were external providers rather than school-based staff. Notably, certification specifically designed for teaching children appeared limited, and many respondents were unaware of the instructor's credentials. Among the uncertified respondents (29.2%), all were primary school teachers, with some utilising online platforms like Cosmic Kids Yoga, which do not require formal yoga teaching qualifications.

In Phase Two, case study findings indicated that prior to employing specialised staff with yoga teaching certification, yoga sessions were primarily led by classroom teachers using online resources. While this approach offered a low-cost and accessible solution, both principals emphasised that the employment of appropriately qualified instructors was essential for the sustainable and effective delivery of a mindful yoga programme. These

findings align with existing literature highlighting the significant variability in instructor qualifications and a general lack of standardisation in school-based yoga delivery (Elwy et al. 2014; Butzer et al. 2015b).

The current 'gold standard' for general yoga teaching is the completion of a 200-hour certified teacher training programme, accredited by bodies such as Yoga Alliance Professionals (2024). Additionally, several scholars recommend further certification specifically tailored to children's yoga (Childress and Cohen Harper 2015; Velásquez et al. 2015; Cook-Cottone 2017; Taylor et al. 2019). However, the practical feasibility of this model is questionable. As Wilkin et al. (2024) note, such provision is often financially and logistically prohibitive for schools, particularly where external instructors must be sourced. Furthermore, while qualified instructors may bring depth in training, they may lack contextual understanding of pupil's individual needs or broader school culture, particularly when working peripatetically. This creates a well-documented tension between programme fidelity and scalability. High-quality, well-trained delivery may support positive outcomes but is rarely achievable at a population level without significant resource investment.

In conclusion, the variability in staff qualifications and training presented notable challenges. While some schools relied on accessible online platforms to address staffing limitations, others employed qualified yoga instructors to deliver structured sessions. This inconsistency is reflective of the existing literature, highlighting the necessity for a standardised approach to training, along with clear guidelines to ensure the sustainability and efficacy of these programmes (Butzer et al. 2015b; Khalsa and Butzer 2016). In both case study schools, staff members' capacity to deliver high quality yoga instruction directly influenced the programme's acceptance and overall impact, emphasising the need for professional development opportunities tailored to the school environment.

6.2.1.4 The Breath in mindful yoga

The findings highlight the centrality of the breath as a focal point in yoga and mindfulness practices. Consistent with the literature, the participants' responses emphasised its positive impact on stress and anxiety reduction, emotional regulation, and the enhancement of focus and concentration (Zope and Zope 2013; Menezes et al. 2015; Zaccaro et al. 2018;

Kjærvik and Bushman 2024). Breath serves as a conduit for both classroom-based mindfulness, and mat-based yoga practice with yoga and breathwork being inextricably linked.

In structured yoga sessions, Caleda and Bond (2024) describe a 'Time-In' component where students use breath to connect mind and body. Through conscious breathing they "*slow down, reconnect with their breath, and shift their attention inward*" (Caleda and Bond 2024, p. 2). This practice, typically performed lying supine during the 'preparatory' phase of the session, allows participants to centre themselves mindfully before beginning physical poses. The integration of yoga poses and mindfulness, as mindful movement, emerges when breath is appropriately utilised throughout a yoga sequence. Feagans Gould et al. (2016) suggest that breath serves as a bridge between the physical and mental dimensions of yoga, with poses offering an opportunity to practice mindfulness by anchoring attention to movement and breath.

Participants in this study echoed this integration with instructors emphasising the role of conscious breathing in achieving both mental focus and physical stability within key poses. Wolff and Stapp (2019, p. 2) make a similar observation, noting that to balance in Tree pose, a child must engage their breath to "*filter out distractions, internalise sensations, and adjust their body accordingly.*" Razza et al. (2015) support this, asserting that cultivating body awareness while synchronising breath and movement, is a fundamental aspect of yoga at any age. They add that as children practice breathing techniques, their self-regulation skills improve.

Breath was identified as a key theme during analysis of the case study data (see Table 6.1), frequently associated with stress and anxiety management (see Figure 5.2) and improved focus and concentration (see figure 5.3). Participants provided context-specific examples of using breath techniques like "Starfish Breathing", "Belly Breathing" and the "Hoberman Sphere" to regulate emotions in various settings. For children the use of the breath was essential for alleviating anxiety, nurturing self-regulation, and achieving a state of calm. Principals, yoga teachers, and most children consistently noted the calming effect of the yoga, and its positive on focus and concentration. This perceived effectiveness may also play a role in the sustainability of such interventions; March et al. (2022) found that the continued use of school-based programmes is often influenced by teachers' perceptions of

their impact on immediately observable outcomes, such as classroom behaviour and climate. While the exact mechanisms of impact may not always be empirically confirmed, the belief among staff that yoga contributes positively could enhance the likelihood of its long-term implementation (March et al. 2022)

Cook-Cottone (2017, p. xi) explains that regardless of how well-designed, research informed, or excellent your curriculum may be, students cannot learn if they are not fully present, *“It is in the present moment that real learning occurs.”* Both the findings and the literature suggest that breath is integral to the physical and mental benefits of yoga and mindfulness. It nurtures emotional resilience, self-regulation, and mental clarity, making it a foundational element of these practices. de Manincor et al. (2015) highlight breath regulation as a key component of yoga interventions for reducing depression and anxiety. Techniques such as relaxed abdominal-diaphragmatic breathing, lengthening the exhale, and calm, steady breathing are considered very important, or essential. However, the consensus also emphasises that yoga is most beneficial when its components, breath regulation, postures, relaxation, and meditation, are used in an integrated and individualised approach (Razza et al. 2015; Reid and Razza 2022).

While breath regulation alone may provide some benefits, particularly for calming the mind and reducing anxiety, the study suggests that combining it with other components amplifies its effectiveness. This interconnection reflects a broader theme emerging across the findings; yoga’s strength lies not in any single element, but in the integration of its parts within the specific context of implementation. This raises important considerations about how yoga might best be conceptualised within educational research and practice.

6.2.1.5 Yoga as a complex intervention within a complex setting

The findings across Section 6.2.1 illustrate that yoga, as implemented in NI primary schools, functions as a complex intervention. According to Hawe et al. (2004), complexity arises when the interaction between components generate outcomes that cannot be fully understood by examining the parts in isolation. In this study, participants consistently identified multiple components of yoga particularly breathwork, postures, mindfulness, and reflective practices, as beneficial for supporting regulation, attention, and emotional

wellbeing. While the study did not directly compare individual components with their combined use, qualitative accounts suggest that these elements were often experienced as interrelated. For example, breathing enhanced focus during postures, while quiet time supported emotional recovery after movement. This experiential interdependence, as described by teachers, pupils, and instructors, aligns with broader evidence that the value of yoga may lie in the way its components are sequenced, integrated, and adapted within the classroom environment (Chen and Pauwels 2014a; Chen and Pauwels 2014b; Feagans Gould et al. 2014; Feagans Gould et al. 2016).

As discussed in the literature review (Section 2.4.2.1), understanding the specific mechanisms through which multi-component interventions produce their effects remains a challenge. While this study did not isolate individual components, it suggests that the value of yoga may lie in the integration of its elements, breathwork, postures, and mindfulness, rather than any single practice. This reinforces the importance of evaluating school-based interventions not only for their outcomes, but also for the processes and combinations that make them effective (de Manincor et al. 2015; Durlak et al. 2022).

This complexity is further shaped by the context in which yoga is embedded. As Moore et al. (2017) argue, interventions are not just complex solely because of their internal design; rather, they become complex when delivered in dynamic social systems like schools. The case study schools in this research reflect this dynamic system. Staff, pupils, parents, and leadership brought diverse values, experiences, and expectations that influenced how yoga was introduced, received, and adapted. For example, delivery was shaped by variations in staff qualifications, religious concerns, social class, and pupil neurodiversity, each adding layers of interpretive and practical complexity.

These contextual factors also highlight the importance of caution in the delivery of mindfulness-based interventions. As discussed in the literature review (Section 2.5.2), the MYRIAD trial, a large-scale UK study, found no significant benefits of school-based mindfulness training when delivered at scale, and even reported adverse outcomes for vulnerable subgroups (Kuyken et al. 2022; Montero-Marin et al. 2022). These findings serve as a reminder that yoga and similar practices must not be applied as blanket solutions. Instead, their delivery should be sensitive to individual and contextual differences, ensuring programmes are developmentally appropriate, inclusive, and continuously evaluated for

unintended effects (Evans et al. 2015b). This reinforces the importance of exploring how facilitator training, pedagogical insight, and broader systemic and equity concerns may shape programme effectiveness (Durlak et al. 2022; Sharples et al. 2024). While this study did not compare delivery models, perceived differences in educator confidence and delivery quality suggest that further research is needed to examine the relative value of teacher-led versus specialist-delivered approaches (Shinde et al. 2020).

Framing yoga as a complex intervention highlights the importance of adaptive fidelity, maintaining the function of the intervention (such as promoting self-regulation) while allowing flexibility in form (e.g., delivery mode, session length, cultural framing). This is consistent with Hawe et al. (2004) in their assertion that preserving an intervention's intent, rather than rigidly replicating its content, is essential for contextual relevance. Furthermore, recognising complexity allows researchers and practitioners to move beyond binary assessments of effectiveness and instead explore how yoga works, for whom, and under what circumstances. These findings align with Reid and Razza's (2022) observation that mindful yoga appears most effective when integrated into the classroom over time and adopted to children's evolving needs. In their year-long programme, it was the sustained, embedded nature of delivery that enabled stronger relationships and a greater sense of ownership among teachers and pupils. This reinforces the idea, also reflected in the current study, that mindfulness-based interventions are most impactful not as a temporary add-on, but when woven into the rhythms of school life and delivered with contextual sensitivity; features characteristic of complex interventions operating in complex systems (Janz et al. 2019).

In this light, yoga's role in schools is not simply to deliver a predefined programme but to offer a flexible, multi-component practice that interacts with and adapts to the social, cultural, and developmental context of each school. This conceptual shift provides a more realistic and useful lens through which to consider yoga's implementation, scalability, and sustainability in real-world educational settings. It also highlights the importance of adopting a targeted rather than a solely universal approach. While whole-school wellbeing strategies have value, some pupils may benefit more from tailored interventions that address specific emotional, behavioural, or social needs (Guzman-Holst et al. 2024).

6.2.1.6 Integrating yoga in schools: Navigating secularisation and fidelity

This section revisits a core tension identified in the literature (see Section 2.5), namely whether yoga's essential mechanisms can be preserved when it is decoupled from its philosophical and spiritual roots. The findings from this study provide real-world insights into how educators navigated this challenge within culturally and religiously sensitive school environments.

Findings from both the scoping questionnaire and case study interviews indicate that, despite growing recognition of yoga's health and wellbeing benefits, its integration into schools is often complicated by perceived religious conflict. The findings suggest that concerns related to religious beliefs and community expectations continue to pose barriers to the inclusion of yoga in school settings. These tensions reflect broader socio-cultural dynamics within the NI education system, where denominational influences remain deeply embedded.

This sensitivity is amplified in the NI context, where the RE curriculum at primary level remains predominantly Christian focused. Pupils are not formally introduced to world religions until Key Stage 3 in secondary school (DENI 2007), contributing to a limited familiarity with non-Christian worldviews and potentially heightening resistance to practices such as yoga when perceived as spiritual in origin. This issue has been highlighted in the recent *Strategic review of the NI Curriculum* (Crehan 2025), which noted that parents expressed dissatisfaction with the exclusively Christian focus of RE in primary schools, and called for a more balanced, inclusive content. The review also acknowledged concerns that RE teaching was sometimes evangelical in tone and recommended a review of the primary syllabus to incorporate other world religions. These findings confirm the enduring influence of religious framing in primary education and the sensitivity around introducing practices such as yoga. In this context, while practical challenges such as staffing and logistics were noted, it was objections grounded in religious beliefs that often exerted the most powerful influence over school-level decision making.

As discussed in Theme 4 (Section 5.2), several educators navigated potential resistance by modifying the language and presentation of yoga sessions. This included omitting Sanskrit terms, framing activities as physical or mindfulness-based, and communicating transparently with parents and governors. These strategies derived from practice-based

insight, align with culturally responsive approaches proposed in the literature (Cook-Cottone et al. 2019), which emphasise secular framing and a focus on evidence-informed benefits such as self-regulation, attention training, and emotional wellbeing. Importantly, school leaders often acted as mediators in this process, framing yoga in ways that aligned with Christian values, such as silence, compassion, and inward reflection. These observations are consistent with Herlitz et al. (2020) and (Taylor et al. 2019), who highlight the importance of leadership in gaining staff and parental trust.

Nonetheless, the study also revealed examples of enduring resistance. Some schools, particularly those with strong faith-based governance structures, perceived yoga as inherently incompatible with their educational ethos. These objections were not easily overcome by secular reframing or reassurance. In such cases, yoga was seen as ideologically misaligned, regardless of how it was described or adapted. This reflects the limits of cultural adaptation and the extent to which deeply held beliefs shape educational choices (Douglass 2010; Hayward and McManus 2020). Such resistance is not unique to individual schools. In 2019, for example, an Irish Bishop publicly opposed the inclusion of yoga in Catholic schools, framing it as incompatible with Christian values (Skelton 2019). Similarly, Christian Concern, a UK-based advocacy group, has criticised the influence of secularism in schools, cautioning against practices they perceive as encroaching on traditional faith-based education (Beego 2024). These examples reflect broader societal currents that may influence school decision-making (Walsh 2022).

Importantly, these findings raise a deeper, unresolved question: can the mechanisms hypothesised to support self-regulation in a school-based yoga intervention, such as embodied self-awareness, breath regulation, and reflective attention be retained when the practice is fully secularised? This is not only a cultural dilemma but a scientific one. While these elements have been associated with positive outcomes in broader yoga and contemplative science literature (e.g., emotional regulation, attention control, and stress reduction), the extent to which their effectiveness depends on traditionally spiritual framing remains unclear, particularly within universal, school-based programmes. This uncertainty echoes concerns raised in the literature (Jain 2014; Matko et al. 2021), and highlights an important avenue for future research. Namely the identification and empirical testing of essential ingredients in culturally adapted interventions.

Thus, the challenge for school-based yoga implementation is twofold: ensuring cultural and religious appropriateness, while preserving the fidelity of the intervention's active ingredients. The findings suggest that although some schools successfully navigate this tension, it remains a source of resistance and uncertainty, one that requires careful negotiation and, in some cases, policy-level support (Cook-Cottone et al. 2017; Cook-Cottone 2017)

6.2.2 RQ2: What are the perspectives of key stakeholders on the current and future use of yoga in primary schools?

While stakeholder perspectives are interwoven throughout the findings, this section also draws together evidence relevant to Research Question 2, which explored the views of principals, yoga teachers, and pupils regarding the current use of yoga in NI primary schools. These perspectives emerged across both phases of the research and are embedded within the thematic findings presented in Chapters 4 and 5. As such, the analysis that follows reflects a synthesis of these stakeholder voices, illustrating how their experiences, expectations, and concerns shaped the delivery, adaptation, and perceived value of school-based yoga. These insights are further explored in the context of Research Question 3, with specific attention to delivery models, age groups, qualifications, and perceived outcomes.

6.2.3 RQ3: Can yoga be integrated within the curriculum of schools in NI?

The findings from both phases of this study suggest that yoga can be meaningfully integrated into the curriculum activities of NI primary schools, although its success is contingent upon supportive leadership, creative adaptation, and whole school buy-in. The case studies illustrated that integration did not follow a single model; rather, yoga was embedded in a variety of ways, through PE, PDMU, after school programmes, and cross-curricular learning. This flexibility in delivery reflects yoga's adaptability and its potential alignment with the aims of the NI primary curriculum, particularly its emphasis on holistic child development (Council for the Curriculum Examinations & Assessment 2007).

A whole school approach was described as particularly effective in the case study schools, where leadership, staff, pupils, parents, and governors were engaged in the process.

Principles actively nurtured positive attitudes, built consensus, and encouraged informal and formal discussions to support implementation. The perceived ripple effects of such collaborative support extended beyond the classroom, reinforcing the school's wellbeing culture and strengthening home-school connections.

Yoga was not confined to structured PE classes but was also used creatively in curriculum subjects such as *The World Around Us*, and in brief, targeted 'brain breaks' that supported focus and emotional regulation. Adaptations were evident depending on the age group, with storytelling and animation supporting younger children, while older pupils responded better to more structured movement and reflection. These findings echo research highlighting yoga's versatility and its ability to meet various developmental needs (Feeney and Szczech Moser 2014; Martin et al. 2024).

This dual curricular placement suggests a strategic alignment with yoga's multifaceted benefits, promoting both physical and emotional wellbeing. Such integration reflects a growing international emphasis on yoga within educational programmes targeting Social and Emotional Learning (SEL), particularly given PDMU's focus on fostering emotional resilience and social competencies in the Northern Irish curriculum (Maynard 2017). Furthermore, incorporating yoga as movement breaks or calming activities across various curricular contexts demonstrates a flexible pedagogical approach, extending mindfulness practices beyond structured PE or wellness classes. This adaptable use aligns with best practices in mindfulness education, supporting a holistic development model within primary education (Weare 2015; Weare and Bethune 2021).

This is comparable to established school-based yoga classes in the United States (US), where programmes such as Yoga ED (Caleda and Bond 2024) are aligned not only with the academic calendar but also with the national education framework. Originally structure around the National Standards for Physical Education (American Alliance for Health Physical Education Recreation and Dance 2014), these programmes were later supported by SHAPE America (Society of Health and Physical Educators). SHAPE America plays a key role in influencing physical education across the U.S. offering guidelines and best practices widely adapted by states and school districts. While it does not directly control curriculum delivery, its influence ensures a standardised approach to integrating physical wellness and movement-based education, including yoga, into mainstream schooling

Despite promising examples abroad, implementing similar models within NI schools produced distinct challenges, particularly around time constraints, curriculum overload, and the availability of qualified staff. These were often framed by participants in terms of the pressures to prioritise literacy and numeracy, which made it difficult to timetable non-core subjects or wellbeing initiatives such as yoga. Principals and teachers expressed concern that introducing new content could be seen as ‘just another add-on’. However, such concerns were often reframed through practice wherein yoga was perceived not as a distraction from academic learning, but as a tool that enhanced pupils’ readiness to learn. Teachers noted improvements in focus, emotional regulation, and classroom behaviour, factors that support, rather than detract from academic performance. Staff recognition can be integral to success, March et al. (2022) observed that wellbeing interventions are more likely to be sustained when teachers observe immediate benefits to classroom climate and student engagement.

In conclusion, while the NI primary curriculum does not currently mandate yoga, this study demonstrates that integration is not only feasible but can be meaningful and impactful when delivered through a whole-school, context sensitive approach. Further support through policy, training, and leadership development could enhance the scalability and sustainability of such efforts (Herlitz et al. 2020).

6.2.4 RQ4: What would a testable model (and appropriate theory of change) for the implementation of a yoga intervention in NI schools look like?

A testable model for implementing yoga in NI primary schools would be grounded in Bronfenbrenner’s EST, which emphasises the dynamic interaction between individual, interpersonal, organisational, community, and societal influences. This model would centre on self-regulation as the core mechanism of change, achieved through a combination of structured yoga practices and rational delivery processes.

6.2.4.1 Core components one: Breathwork

As outlined in both the literature and the current study, appears to be key. Central to emotional regulation, focus, and anxiety reduction, breathing practices such as ‘starfish

breathing' and 'belly breathing' function as psychophysiological anchors. These practices, observed in both case study schools, are key for cultivating calmness and focus across contexts.

6.2.4.2 Core component two: Mindful movement

Yoga postures also appear to be important components. Appropriately sequenced and age-adapted physical poses can facilitate embodied mindfulness, emotional regulation, and cognitive engagement. Delivery may vary from full-length PE sessions to short classroom based 'brain breaks.' Mindfulness practices and affirmations, allowing for integrated moments of stillness and guided reflection, can build metacognition, resilience, and self-efficacy, which are all essential traits in children's social and emotional development.

6.2.4.3 Core component three: Affirmations and relaxation

Guided relaxation and the use of affirmations emerged as important, though sometimes overlooked, components of the intervention. These practices provide space for the children to internalise positive messages and shift attention inward, helping to consolidate the benefits of movement and breathwork. In both case study schools, periods of stillness were paired with affirmations to promote self-esteem, reduce anxiety, and cultivate emotional resilience. This reflective element reinforced key aims of the programme, including calmness, self-regulation, and classroom readiness, particularly when incorporated at the close of sessions or during transition between learning activities.

6.2.4.4 Core component four: Culturally sensitive framing

In order to address concerns, especially in faith-based contexts, the model recommends rebranding yoga as a secular wellbeing intervention. This includes omitting spiritual language and clearly communicating the programmes health focused intent.

6.2.4.5 Professional development

In order to maintain delivery quality, and ensure consistency and sustainability, staff should either hold (or be supported to obtain) appropriate qualifications, such as a 200-hour yoga teacher training, with a specialism in children's yoga. Monitoring and responsiveness. The model would include mechanisms for evaluating both intended and unintended outcomes. As mindful practices can be counterproductive for some children (e.g., those with heightened emotional sensitivity), ongoing observation and responsive adaptation are essential.

6.2.5 Theory of change

The model's theory of change posits that if yoga is delivered through developmentally appropriate, culturally sensitive practices embedded within existing school systems, then:

- Pupils will gain tools for self-regulation, improving focus, emotional resilience, and behaviour.
- The school environment will become more conducive to learning and wellbeing.
- Relationships between students, teachers, and parents will strengthen through shared practices and values.
- Over time, school culture will shift toward a more holistic, preventative approach to mental health.

This model is grounded in Bronfenbrenner's PPCT framework, which emphasises that processes supporting child development must be sustained, reciprocal, and situated within multi-layered contexts (Bronfenbrenner and Morris 2006). Accordingly, yoga is not conceptualised as a standalone programme, but as an adaptable, embedded practice that interacts with broader school systems, relationships, and cultural norms.

To safeguard against potential harm and to ensure the effectiveness of implementation, the model explicitly integrates principles of proportionate universalism (Marmot et al. 2010), contextual adaptation (Hawe et al. 2004), and formative evaluation. This is in direct response to concerns emerging from large-scale mindfulness studies (Kuyken et al. 2022; Montero-Marín et al. 2022). These have highlighted that some universal mental health

programmes may inadvertently increase stress or anxiety for certain pupils, particularly when applied rigidly or without developmental sensitivity.

The proposed yoga model therefore avoids manualised, one-size-fits-all approaches. Instead, it supports flexible delivery that can be adapted based on children's age, cognitive readiness, and school context. It also promotes formative monitoring processes that enable staff to identify pupils for whom participation may not be suitable, or who may benefit from differentiated support. These safeguards are important given that many existing yoga studies have lacked formal adverse event reporting mechanisms, a recognised methodological limitation within the field (Ferreira-Vorkapic et al. 2015; Hart et al. 2022). The model assumes that change is driven by embodied mechanisms, such as breath awareness, physical grounding, and movement-based regulation, rather than purely cognitive introspection. This is particularly relevant for younger or neurodiverse children, for whom abstract reflection may be developmentally inappropriate (Razza et al. 2015; Hart et al. 2022). By attending to these factors, the theory of change offers a more inclusive, contextually grounded alternative to traditional mental health interventions.

Figure 6.1 visually represents this theory of change, illustrating how mindful yoga, when embedded into school systems with appropriate adaptations and monitoring, can generate meaningful short, medium, and long-term outcomes. The diagram also emphasises that the success of the intervention is contingent upon its responsiveness to context, and its alignment with existing school structures and values.

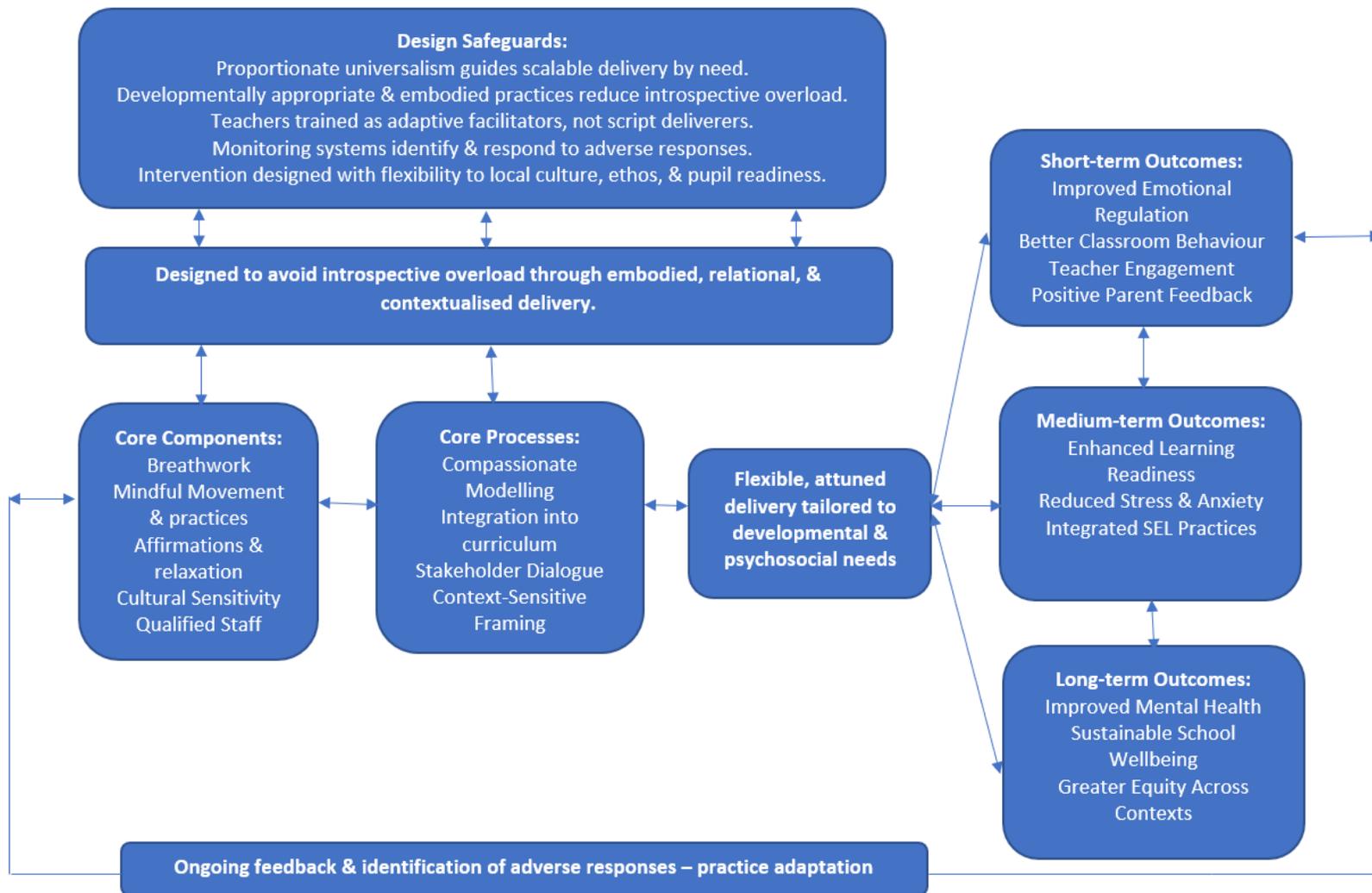


Figure 6.1: Theory of Change Model

6.3 Strengths and limitations

6.3.1.1 Strengths

This study offers timely insights into the integration of yoga within NI primary schools, contributing both theoretically and practically to the fields of educational wellbeing, curriculum studies, and inclusive practice. A key finding is the role that yoga and mindfulness can play from a NI perspective in promoting self-regulation, emotional resilience, and academic readiness among children, particularly in the wake of COVID-19. This research applies Bronfenbrenner's EST as an analytical lens to examine school-based wellbeing interventions. Through this framework, it presents a multi-layered understanding of the various factors at play. Specifically, it explores how individual, interpersonal, organisational, and cultural contexts intersect to shape both the implementation and reception of these initiatives.

A primary contribution of this study lies in its development of a context sensitive theory of change and logic model for implementing yoga in schools and informing future evaluation. These foreground the importance of self-regulation, culturally adapted delivery, and whole school engagement. Beyond NI, these findings may inform international approaches to integrating mental health and SEL practices in faith based or divided societies, particularly where religious and cultural narratives heavily influence educational settings. The research also adds to the literature on how educational leaders can strategically mediate innovation while respecting institutional ethos and parental concerns.

While the study is grounded in NI's particular educational and socio-cultural context, several findings likely have relevance across the wider UK. Post-pandemic pressures on pupil wellbeing, competing curricular demands, and the practical need for whole-school, implementation ready approaches are widely reported challenges throughout the UK (Marmot et al. 2020b; Moore et al. 2022; Mental health Foundation 2023). In this respect, the study's emphasis on leadership endorsement, staff confidence, adaptable delivery formats, and transparent communication with families offers potentially transferable implementation lessons. However, the NI setting also foregrounds denominational governance and faith-related sensitivities more strongly than some other UK regions, reinforcing that transferability lies primarily in the principles of implementation rather than a uniformed model of provision.

6.3.1.2 *Limitations*

While this study provides valuable insights into the integration of yoga in NI primary schools, several methodological limitations must be acknowledged.

Firstly, the case study design, although appropriate for in-depth exploration of a complex social phenomenon, inherently limits the generalisability of the findings. With only two participating schools, the results reflect context specific insights rather than broad, population wide trends. As such, while the findings may offer useful implications, they should not be assumed to represent the experiences or perspectives of all primary schools across NI.

Secondly, the research process was significantly impacted by the COVID-19 pandemic, which influenced both access and data collection. School closures, staff absences, and public health restrictions created logistical challenges and led to a reliance on convenience sampling. Although the initial sampling strategy aimed for purposive variation, capturing a balance across socioeconomic status, cultural diversity, school type, and geographical setting, several schools withdrew. This resulted in a more limited and less diverse sample than originally planned. This compromises the representativeness of the study.

Thirdly, while the study was strengthened by a commitment to reflexivity, it must be acknowledged that the researcher's personal and professional background, particularly a strong connection to yoga practice and instruction, may have influenced the framing, interpretation, and analysis of the data. Although subjectivity is accepted and even valued within interpretivist and social constructionist paradigms and qualitative research methods, it remains important to recognise how researcher positionality may have shaped the construction of meaning throughout the study.

Additionally, as is typical in qualitative research, much of the data in this study was generated through interviews designed to explore participants' lived experiences and perspectives. This method is well suited to capturing the subjective, nuanced nature of beliefs, values, and practices surrounding wellbeing and yoga in school settings. However, it is important to acknowledge that participants' accounts may still be shaped by the broader social and institutional contexts in which they operate. For example, individuals in

professional roles may have felt constrained in how openly they could discuss topics such as religion, school ethos, or emotional wellbeing, particularly where these intersect with contested or sensitive issues. While the research design prioritised the creation of a safe and confidential space to facilitate open dialogue, the influence of such contextual pressures cannot be entirely ruled out.

Moreover, the perspectives of pupils, although central to the study's ethos, were limited in scope. Due to COVID-19 related complications, only one school was able to facilitate small group interviews with children. While these sessions generated rich data, they may not fully represent the range of pupil experiences or views across different school types and community settings. Group dynamics may also have influenced participation, with some children perhaps feeling reluctant to share openly in the presence of peers.

Gender was not examined systematically as a moderator of engagement or perceived impact in either phase, and the study was not designed to support fine-grained gender comparisons. Given evidence that responses to universal wellbeing interventions may differ across subgroups (including by gender), this represents a limitation in relation to understanding whether acceptability, uptake, or perceived outcomes vary for boys and girls (Durlak et al. 2022). Future research should explicitly investigate gendered experiences of school-based yoga, including how framing, peer dynamics, and developmental stage may shape engagement and perceived benefit.

Finally, the study provides a snapshot of current perceptions and practices but does not offer longitudinal insight. The absence of long-term follow-up means the sustainability of yoga-based interventions and their ongoing impact on children's wellbeing remains unknown. Future research might benefit from extended case studies or longitudinal designs to explore changes over time and better understand the implementation and outcomes of such interventions in evolving educational contexts.

Taken together, these limitations suggest that while the study offers meaningful and timely contributions, its findings should be interpreted with appropriate caution and viewed as part of an evolving body of research into school-based wellbeing initiatives.

6.4 Recommendations

This section outlines the key recommendations emerging from the study's findings, situated within Bronfenbrenner's EST. These recommendations aim to inform future policy, school practice, and research relating to the integration of yoga and mindfulness in primary school contexts in NI.

It is important to clarify at the outset that these recommendations do not advocate for the compulsory inclusion of yoga and mindfulness within the NI primary curriculum. Rather, the intention is to support the recognition of these practices as legitimate, evidence-informed wellbeing strategies which schools may choose to adopt where there is identified interest and perceived benefit. As the study has demonstrated, yoga and mindfulness are not universally appropriate, some children may not benefit from such practices, and others may choose not to engage. A one-size-fits-all approach would therefore be neither effective nor appropriate.

Moreover, the role of school staff in any wellbeing initiative must be voluntary. Given the existing pressures on teachers, yoga and mindfulness should not be viewed as additional burdens or imposed responsibilities. Staff buy-in is essential, and any school-based implementation must be grounded in leadership support, shared values, and meaningful engagement across the school community.

6.4.1 Policy level recommendations

6.4.1.1 Recognition within existing wellbeing frameworks

The Department of Education NI should formally acknowledge yoga and mindfulness as optional wellbeing interventions within existing policy frameworks, such as *The Children and Young People's Emotional Health and Wellbeing in Education Framework* (DENI 2021a). This would grant schools legitimacy to explore these practices without promoting universal implementation. Such an approach aligns with the NI primary curriculum's emphasis on holistic child development (Council for the Curriculum Examinations & Assessment 2007), while also respecting institutional autonomy.

However, in light of growing evidence that universal mindfulness programmes may carry unintended harms, particularly when applied rigidly or without developmental sensitivity

(Kuyken et al. 2022; Montero-Marin et al. 2022), any policy-level recognition must be accompanied by cautious framing. As reflected in the updated Theory of Change (Figure 6.1), this model advocates for proportionate universalism and embedded feedback mechanisms to ensure practices remain adaptive, inclusive, and attuned to pupil needs. Importantly, yoga's embodied and regulated delivery format may offer a lower risk alternative (Serwacki and Cook-Cottone 2012a; Hart et al. 2022), but methodological limitations, such as the lack of formal adverse event reporting indicate that risk cannot be ruled out (Ferreira-Vorkapic et al. 2015).

Thus, any endorsement should clarify both the potential value and evidential uncertainty, supporting schools to make informed, reflective decisions grounded in local context and capacity. Critically, this should be accompanied by a commitment to robust monitoring and evaluation, capturing both benefits and potential harms, to build a more reliable evidence base. Evaluation should include mechanisms for capturing pupil outcomes, teacher observations, and any unintended effects, with attention to developmental appropriateness, inclusion, and contextual fit (Durlak et al. 2022).

6.4.1.2 Guidance on secular, and culturally sensitive delivery

To address concerns around the spiritual or religious connotations of yoga, the DENI should develop guidance to ensure its delivery is both secular and culturally sensitive. Such guidance should offer practical advice on framing, inclusive language, and strategies for parent and government engagement. Thereby helping to mitigate concerns about the practice's perceived spiritual associations (Cook-Cottone et al. 2019).

This recommendation is particularly relevant given the religious education structure in NI primary schools, where curricular exposure to world religions is limited until Key Stage 3 at secondary school (ages 11 – 13) (DENI 2007). As highlighted in earlier sections, this can contribute to misunderstandings about the nature of yoga, especially in faith-based settings. Case study findings illustrate how school leaders have already begun to navigate these sensitivities, reframing yoga through secular language, promoting transparency, and aligning sessions with school values. Formal guidance from DENI would not only support such leadership efforts but also ensure consistency and legitimacy across school settings.

These findings are echoed in the recent Strategic Review of the NI Curriculum (Crehan 2025), which reported parental concerns about the exclusively Christian nature of RE in primary schools and the need for more balanced, inclusive content. While RE sits outside the main curriculum framework, the Review's acknowledgement of the need for reform may signal a shift toward greater curricular inclusivity, creating a more receptive context for the considered integration of non-traditional wellbeing practices such as yoga.

In line with research on culturally responsive wellbeing provision, this guidance should also promote reflective dialogue with stakeholders and support locally adaptable models (Childress and Cohen Harper 2015). Embedding secular delivery within broader wellbeing strategies may enable schools to expand access to yoga while respecting the cultural and religious identities of their communities.

6.4.1.3 Qualification and professional development standards

Before establishing definitive qualification standards, further research is needed to determine whether delivery by trained instructors offers significant added value compared to teacher-led or usual practice models. A three-arm-trial comparing outcomes between usual practice, teacher-delivered yoga, and externally delivered programmes could help establish the relative effectiveness and cost-benefit of each approach (Shinde et al. 2020). Given the additional expense associated with hiring trained instructors, this model should only be favoured if demonstrably more effective in supporting pupil outcomes.

That said, findings from this study and others (Elwy et al. 2014; Butzer et al. 2015b) suggest that inconsistency in delivery remains a concern. Should future research support the added value of specialised provision, DENI should consider establishing minimum qualification standards to ensure safe, consistent, and effective delivery. This would enhance accountability and safeguard pupil wellbeing. Where schools wish to build internal capacity, DENI should also facilitate voluntary CPD pathways for interested staff. Providing funded or subsidised training would support sustainability and widen participation, particularly across schools where hiring external specialists is not feasible. Professional development is widely recognised as essential to implementation quality and intervention fidelity.

Crucially, engagement in training should remain voluntary. As discussed in implementation literature, staff autonomy is key to sustainability (Herlitz et al. 2020). Mandating additional responsibilities without adequate resourcing risks undermining the restorative potential of wellbeing practices (March et al. 2022). Instead, schools should be encouraged to identify interested staff and support them in developing relevant expertise over time.

By combining cautious research-led policy development with optional capacity building supports, DENI can help ensure that school-based yoga and mindfulness practices are implemented with fidelity, cultural sensitivity, and a commitment to pupil safety.

6.4.1.4 Integration with school evaluation and improvement planning

Where schools choose to implement yoga or mindfulness, integrating light-touch intervention tracking into school development planning and, where appropriate, reflective discussions during Education and Training Inspectorate (ETI) engagement could encourage formative evaluation, promote sustainability, and support the dissemination of effective practice. This recommendation aligns with the *Children & Young People's Emotional Health and Wellbeing in Education Framework* (DENI 2021a), which provides strategic guidance for schools in adopting a whole school approach to emotional health and wellbeing. The framework emphasises the importance of integrating wellbeing into existing school policies, development plans, and self-evaluation structures. It also encourages the use of evidence-informed practices that can be tailored to individual school contexts. Interventions such as yoga and mindfulness, where adopted voluntarily, can serve as one strand of this wider whole school wellbeing approach. Their integration into school planning processes supports the framework's call for coherent, sustainable, and pupil-centred emotional health strategies.

The guidance is reinforced by the ETI's '*An Evaluation of the Effectiveness of Emotional Health and Well-being Support for Pupils in Schools and EOTAS Centres*' (ETI 2018), which identifies examples of good practice in wellbeing provision and highlights the importance of embedding such work into a school's ethos and strategic priorities. The report highlights that schools which include wellbeing explicitly in their development plans, supported by

appropriate leadership and collaboration, are better positioned to deliver consistent, high-quality support for pupils.

Similar integration of wellbeing into inspection and improvement planning is evident in other UK jurisdictions. In Scotland, Education Scotland's *How Good Is Our School?* (4th Edition) embeds pupil wellbeing through the "Wellbeing, Equity and Inclusion" indicator, encouraging schools to reflect on emotional and mental health within their improvement cycles (Scotland Education 2015). In England, the *Promoting Children and Young People's Mental Health and Wellbeing* guidance (Public Health England & Department of Health 2021) advocates for integrating mental health into school governance, planning, and accountability mechanisms.

However, caution is required. While some school leaders may welcome the opportunity to reflect on the outcomes of wellbeing initiatives, others may perceive tracking burdensome, particularly if linked to formal inspection. March et al. (2024) caution that staff who are overwhelmed, under pressure, and experiencing high levels of stress are unlikely to implement programmes effectively and will have limited capacity to engage creatively or introduce new ideas. Teachers and principals are already subject to considerable administrative demands, and the risk exists that over-monitoring could undermine the restorative and voluntary nature of practices like yoga and mindfulness. These concerns are echoed in research in implementation science, which highlights that school-based wellbeing interventions are most effective when introduced with leadership support, staff autonomy, and responsiveness to context (Moore et al. 2024; Sharples et al. 2024).

While robust evaluation is essential for ensuring the quality and sustainability of wellbeing interventions, reflective practice can play a valuable complementary role within existing school improvement and inspection frameworks (Ward et al. 2023). Rather than replacing formal evaluation, reflection offers a means for pupils, teachers and school leaders to engage with interventions like yoga and mindfulness in a way that is responsive, context-sensitive, and grounded in day-to-day experience (Public Health England & Department of Health 2021).

When integrated into broader school development planning, alongside strategic tools such as self-evaluation reports and ETI engagement, reflective practice can enrich formal

monitoring processes by capturing the nuanced, relational aspects of wellbeing work. This approach aligns with implementation research highlighting that high quality, sustainable interventions require both evidence-informed planning and ongoing staff engagement (Herlitz et al. 2020). It also supports a professional culture in which educators feel empowered to adapt and shape wellbeing provision in ways which are meaningful to their pupils and communities.

6.4.2 Practice level recommendations

In addition to policy level actions, there are several practical steps that schools could take to support the effective and sustainable integration of yoga and mindfulness-based wellbeing practices (Table 6.3). These recommendations, grounded in the findings of this study and Bronfenbrenner's EST, aim to strengthen whole school engagement, support staff, and foster inclusive and culturally sensitive delivery.

These practice level recommendations recognise the operational realities of school life and build on existing school strengths. By supporting autonomy, encouraging contextual adaptation, and nurturing a shared sense of purpose, schools can create an enabling environment in which yoga and mindfulness-based practices are more likely to thrive.

Table 6:3: Practice level recommendations

Recommendation	Summary	Rationale
Establish whole-school wellbeing teams	From interdisciplinary teams comprising senior leaders, class teachers, and support staff to contribute wellbeing activities, including yoga.	Promotes distributed leadership and collective ownership of wellbeing initiatives. Similar models such as SEED (Blair et al. 2024), SEHER (Shinde et al. 2018), and Learning Together (Bonell et al. 2018) demonstrate the value of engaging multiple stakeholders, including students, to enhance programme sustainability and contextual fit (see Section 6.2.3; (Herlitz et al. 2020).
Embed reflective practices into staff culture	Encourage brief, non-evaluative reflection activities (e.g., logs, peer discussions) to inform responsive planning. These could be integrated into existing meeting structures or scheduled during designated staff development time.	Supports professional agency and complements formal evaluation structures. Allocating even small pockets of protected time can foster a culture of curiosity and adaptive thinking (see section 6.4.1.4; (Ward et al. 2023).
Contextualise parent engagement	Offer tailored communication strategies (e.g., sample videos, Q&A events) to address concerns and foster trust.	Transparency and dialogue were found to reduce resistance in faith based settings (see Section 6.2.1.6; (Douglass 2010)
Support voluntary staff involvement through time allocation	Allocate time within the school schedule for planning and delivery of wellbeing practices.	Protects staff wellbeing and maintains the restorative potential of interventions (see Section 6.4.1.4; (March et al. 2024).
Integrate yoga within existing curriculum areas	Use opportunities in PE, PDMU, transitions, and assemblies to incorporate yoga related practices.	Enhances feasibility and supports whole child development without overloading the curriculum (see Section 6.2.3; (Council for the Curriculum Examinations & Assessment 2007)

Notably, these recommendations align with a growing international evidence base supporting whole-school approach. Interventions such as SEED (Blair et al. 2024), SEHER

(Shinde et al. 2018), and Learning Together (Bonell et al. 2018) provide strong evidence for embedding wellbeing initiatives into the core functioning of schools. These programmes demonstrate that multi-stakeholder collaboration, distributed leadership, and student involvement can significantly enhance both engagement and long-term sustainability. These models offer transferable lessons that validate and reinforce the study's findings, particularly regarding the importance of contextual relevance and collective ownership in successful implementation.

One acknowledged challenge, however, is the scarcity of protected time for reflective or creative practice in many schools. Teachers often cite lack of time as a barrier to innovation or sustained change. This study therefore recommends integrating reflection into existing structures, such as repurposing segments of staff meetings or planning periods, to minimise additional burden. As Ward et al. (2023) suggest, even small, consistent windows for shared reflection can meaningfully support adaptive, responsive wellbeing practices without requiring major restructuring.

6.4.3 Research recommendations

To strengthen the evidence base and address limitations identified in the current study, several areas for future research are recommended (Tables 6.4 and 6.5). These are designed to build on the findings and support the development of contextually responsive and sustainable school-based wellbeing interventions.

These recommendations aim to support the development of rigorous, contextually grounded evidence to inform policy, practice, and future programme design. By addressing these questions, researchers can contribute to more equitable and effective wellbeing provision in primary education.

In addition to the qualitative and implementation focused priorities outlined below (Table 6.4), future research should build on the current study by testing predictors of school uptake and sustainability at scale. Larger studies could employ inferential approaches (e.g., regression modelling) to estimate the likelihood of a school adopting yoga provision as a function of contextual variables such as socioeconomic positioning, school size, denominational governance, leadership prioritisation of wellbeing, and the availability of

trained staff. Extending the geographical scope beyond NI through comparative work across England, Scotland, and Wales would further clarify how different policy contexts, inspection frameworks, and community norms shape feasibility, acceptability, and long-term embedding of yoga provision.

Table 6:4 Research recommendations (1-5)

Recommendation	Summary	Rationale
1. Longitudinal evaluation of impact	Conduct longitudinal evaluation of the mindful yoga model developed in this study (Figure 6.1) to assess long-term effects on pupil wellbeing, resilience, and academic engagement.	Provides evidence of sustained benefit and developmental relevance across key educational transitions (see Section 6.2.1; Felver et al., 2016).
2. Amplify pupil voice and experience	Encourage schools and researchers to employ child-led methods to explore pupils' lived experiences of yoga and mindfulness.	Strengthens understanding of engagement and personal impact from the pupil perspective (see Section 6.2.1; March et al., 2022).
3. Examine gendered engagement and outcomes	Investigate whether uptake, acceptability, and perceived outcomes differ by gender and how intervention framing influences engagement across genders.	Addresses a limitation in the current study and supports inclusive, developmentally sensitive implementation by identifying whether adaptations are needed to optimise engagement for different pupils (see Section 6.3.1.2; Durlak et al., 2022).
4. Explore cultural and religious adaptation	Examine how yoga can be effectively framed and delivered in faith-based or religiously diverse schools.	Builds on findings around secular framing and inclusive delivery (see Section 6.2.1.6; Cook-Cottone et al., 2019).
5. Evaluate training and implementation models	Compare in-house CPD with external provider models in terms of effectiveness, practitioner confidence, and sustainability.	Supports evidence-informed decisions around staff development and programme delivery (see Section 6.2.1.3; Cook-Cottone, 2017).

Table 6:5 Research recommendations (6-9)

Recommendation	Summary	Rationale
6. Examine integration with SEL and mental health strategies	Investigate how yoga complements or enhances broader SEL and school-based mental health programmes.	Identifies opportunities for synergy and coherence in whole-school wellbeing provision (see Section 6.4; Caledda and Bond, 2024).
7. Assess cost-effectiveness and resourcing	Conduct economic evaluations of different delivery models.	Highlights the limitations of current economic modelling and the need for evaluations that reflect real-world implementation and outcomes (see Section 6.1.2; Kuyken et al., 2022).
8. Investigate equitable access and outcomes in marginalised or under-resourced settings	Examine how access to yoga interventions varies across schools with different levels of funding, staffing, and infrastructure, and whether current models favour more affluent schools. Explore adaptations to support pupils with SEN, trauma histories, or from disadvantaged backgrounds.	Addresses equity concerns highlighted in this study and the wider literature, ensuring that wellbeing initiatives do not unintentionally exacerbate existing educational or health disparities (see Section 6.1; Moore et al., 2015b; Purdy et al., 2022).
9. Identify core components and mechanisms for impact	Determine the essential mechanisms (“active ingredients”) of school-based yoga and assess whether simplified or adapted formats (“yoga-lite”) maintain these core mechanisms.	Addresses the scalability–effectiveness tension by distinguishing form from function. Builds on Section 6.2.1.1, where effectiveness varied according to how well adaptations preserved self-regulation, emotional awareness, and embodied reflection, supporting implementation integrity (Hawe et al., 2004; Fincham et al., 2023).

6.4.4 Policy level overview

These recommendations highlight the need for coordinated policy, practice, and research to embed yoga and mindfulness within the educational landscape of NI. They reflect the importance of a culturally responsive, developmentally appropriate, and systematically supported approach. One that recognises both the promise and complexity of implementing wellbeing interventions in schools. With strategic leadership, inclusive engagement, and

supportive policy infrastructure, yoga-based practices have the potential to make a meaningful contribution to pupils' emotional development, academic readiness, and overall wellbeing. However, as budgetary pressures intensify, future research should examine equity of access. Yoga interventions must be designed and implemented in ways that promote inclusion and avoid disproportionately benefiting better resourced schools. Sustained impact will depend not only on inclusive design and delivery, but also on ongoing reflection and evaluation to ensure yoga-based practices remain responsive, relevant, and safe.

Chapter 7: Conclusion

7.1 Introduction

This concluding chapter draws together the key findings of the study and reflects on its contributions, both theoretical and practical. The research has examined how yoga and mindfulness may be integrated into primary school settings in NI to support children's social and emotional wellbeing. It has done so through the lens of Bronfenbrenner's EST, situating the findings within the broader educational, cultural, and policy landscape of a divided society (Bronfenbrenner and Morris 2006). The chapter revisits the study's aims and research questions, considers its implications for policy, practice, and scholarship, and offers final reflections on the research process and the journey undertaken.

7.2 Key findings and contributions

This study set out to explore whether, and how, yoga could be effectively integrated within the NI primary curriculum to support social and emotional wellbeing. Across two empirical phases, a scoping questionnaire and two in depth case studies, the study generated a multi-layered understanding of how mindful yoga is currently used, perceived, and negotiated in NI schools. The application of EST facilitated a structured analysis of influences at the individual, interpersonal, organisational, community, and societal levels.

The findings suggest that yoga, when appropriately adapted, may have the potential to support children's emotional regulation, resilience, and capacity for learning. However, this potential appears to be mediated by several contextual variables, notably school leadership, teacher training, religious and cultural sensitivities, and perceptions of curricular space. These findings do not confirm causal relationships but offer grounded insights into the conditions under which yoga may be more feasibly and meaningfully implemented.

Drawing on the data and existing literature, the study proposes a context-sensitive theory of change for school-based yoga interventions, positioning self-regulation as the central mechanism for supporting social and emotional wellbeing. This model is intended as a conceptual foundation for future inquiry and potential pilot implementation, rather than a tested and validated framework.

7.3 Contribution to knowledge

The study offers an original contribution by applying EST to the examination of mindful yoga within a culturally divided education system. It highlights the importance of a flexible, context-sensitive approach that respects community values while enabling innovation in wellbeing provision. While international literature has documented both the benefits and controversies of school-based yoga, this research situates those debates within the specific socio-political and curricular landscape of NI, generating insights that may also inform implementation in other faith based or post conflict education systems.

The study contributes to a deeper understanding of how yoga is framed, negotiated and adapted within school settings. It illuminates the roles of language, leadership, and relational engagement in overcoming resistance and building trust. Importantly, it foregrounds children's voices in shaping understandings of yoga as an embodied, accessible tool for emotional literacy and self-awareness. Given the current lack of empirical research on yoga in NI schools, this study provides a rare, context-specific perspective that addresses a notable gap in the literature. Rather than offering generalised claims, the study presents theoretically informed hypothesis and conceptual insights that can inform further empirical investigation. It advocates for cautious, iterative implementation informed by the lived experience of school communities.

7.4 Implications for policy, practice, and research

While full replication of the discussion's recommendations has been avoided, this chapter acknowledges the interdependence of policy, school-level practice, and future research. For policy, the findings point to the value of recognising yoga and mindfulness as optional, evidence-informed approaches that may complement existing wellbeing frameworks. For school practice, the study highlights the importance of whole-school, developmentally appropriate, and culturally responsive implementation strategies.

For research, it identifies the need for further longitudinal, participatory, and context-specific studies to explore the feasibility, acceptability, and potential outcomes of yoga interventions, particularly among diverse and marginalised groups. The exploratory theory of change developed herein may serve as a basis for hypothesis generation in future trials,

including those examining differential outcomes across delivery models (e.g., teacher led vs externally delivered).

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Appendices

Appendix 1: Full Beginner Yoga Lesson Plan

Theme of the week	New Beginnings
Aims for this week	To deliver a 60-minute class introducing the basic Yoga principles and their psychological and physiological benefits.
Learning outcomes	<p>By the end of the session the students will be able to:</p> <ul style="list-style-type: none"> • Understood the purpose and benefits of the mobilisation poses (Cat to Cow) • Perform Sun Salutation A • Accomplish 2 standing poses (Upward Hands Pose and Mountain Pose) • Complete one1 standing balance pose (Tree) • Execute 1 sitting pose (Head to Knee pose) • Execute 1 seated twisting pose (Seated Half Spinal Twist) • Complete 2 lateral poses (Warrior 2 and Triangle) • Complete 1 inverted pose (Downward Facing Dog) • Perform 1 back bend pose (Bridge) • Perform 1 forward bend pose (Standing Forward Bend) • Understood the purpose and benefits of the rest poses (Childs Pose and Savasana) • Experienced the first stage of breath awareness
Handouts	Yoga for Beginners
Props and equipment	Blocks x 20, Straps x 10, Mats x 10, Eye Cushions x 10, Blankets x 10

No of breaths	Asana/ image/stickman	Benefits	Precautions	Modifications/ progressions	Props
5 mins	Corpse Pose / Belly Breathing 	<ul style="list-style-type: none"> • Encourages relaxation in the muscles • Nourishes the nervous system, internal organs and calms the mind 	<ul style="list-style-type: none"> • Back injury or spinal discomfort: do this pose with the knees bent and the feet on the floor, or support the bent knees on a bolster • Pregnancy raise the head and chest on a bolster 	<ul style="list-style-type: none"> • For low back pain place a rolled-up blanket or bolster under the knees • Raise and support the head with a folded blanket if tilting back 	<ul style="list-style-type: none"> • Block, • Bolster • Towel
3 Breaths	Wind Releasing Pose 	<ul style="list-style-type: none"> • Flexes calves, hams (tight from sitting). • Relieves wind and constipation. • Passively elongates lower back providing easy natural stretch. 	<ul style="list-style-type: none"> • Back injury. • Pregnancy 	<ul style="list-style-type: none"> • For neck pain or injury, do not lift the head. • Place blanket or pillow to support the head. 	<ul style="list-style-type: none"> • Bolster, blanket.
3 Breaths Each	Cat-to-Cow	<ul style="list-style-type: none"> • Stretches the back, torso and neck. • Mobilises spine, hips, knees, shoulders and wrists in preparation 	<ul style="list-style-type: none"> • Neck, knee or wrist injury/condition. 	<ul style="list-style-type: none"> • Use wall instead of kneeling. • Place chair against a wall and place hands on the seat of the chair. 	<ul style="list-style-type: none"> • Chair or wall.

		<p>for the Sun Salutation Sequence.</p> <ul style="list-style-type: none"> • Provides a gentle massage to the spine and belly organs. • Endorses synchronisation of breath with movement. 			
3 Breaths	<p>Mountain Pose</p> 	<ul style="list-style-type: none"> • Improves standing posture, alignment and symmetry • Improves strength of the legs, thighs and core muscles of the trunk • Improves balance • Provides mental sense of firmness, grounding, stillness and calming 	<ul style="list-style-type: none"> • Weak ankles or balance issues can use wall or chair for support • Dizziness, low blood pressure: use wall or chair for support and reduce length of time holding position statically 	<ul style="list-style-type: none"> • Beginners can stand with back against the wall to raise awareness of posture • Wider foot stance (pregnancy, knock knees or foot problems, e.g. bunions) 	<ul style="list-style-type: none"> • Chair or wall
1 Breath	<p>Forward Bend</p>	<ul style="list-style-type: none"> • Lengthens the hamstrings, glutes, erector spinae and gastrocnemius muscles 	<ul style="list-style-type: none"> • Lower back pain: use modified position and move slower into and out of position • Low blood pressure: move slower into and out of position 	<ul style="list-style-type: none"> • Knees bent and hands on thighs • Knees bent and chest on thighs • Knees bent and hands on floor. 	<ul style="list-style-type: none"> • Block

		<ul style="list-style-type: none"> • Strengthens quads and abductors (holding position) • Mobilises spine and hip Preparation for inversions 			
1 Breath	Half Standing Forward Bend 	<ul style="list-style-type: none"> • Strengthens back • Mobility in hips • Lengthens spine • Stretches hamstrings • Improves posture and spine alignment • Strengthens core abdominal and spine muscles 	<ul style="list-style-type: none"> • Back injuries • Knee injuries 	<ul style="list-style-type: none"> • Place hands on a wall or chair, legs perpendicular to the torso, and arms parallel to the floor • Instead of hands to the floor, place them on top of a bolster or two blocks, slightly in front of or beside the feet, to the backs of the ankles 	<ul style="list-style-type: none"> • Wall • Chair • Blocks • Bolster
1 Breath	High Lunge	<ul style="list-style-type: none"> • Softens the groin and hip muscles. Releasing tension • Relieves backache and sciatica • Relaxes the mind 	<ul style="list-style-type: none"> • Knee injuries • Neck problems (look down at the floor instead of straight ahead) 	<ul style="list-style-type: none"> • The knee of the extended leg can be placed on the floor 	<ul style="list-style-type: none"> • Chair can be used for balance

					
1 Breath	Plank 	<ul style="list-style-type: none"> • Strengthens biceps, triceps, deltoids, trapezius, quads, abductors, adductors, erector spinae, abdominals and core trunk stabiliser to hold position 	<ul style="list-style-type: none"> • Wrist problems: can rest on fists, rather than spread hands • Shoulder or lower back problems: use modifications • Pregnancy: use modifications 	<ul style="list-style-type: none"> • All fours position • Three-quarter position • On elbows • Hands or elbows on a step, chair, or elevated bench to decrease range of motion 	<ul style="list-style-type: none"> • Step, chair or elevated bench
1 Breath	Four-limbed Staff 	<ul style="list-style-type: none"> • Strengthens triceps, anterior deltoids • Strengthens trapezius, glutes, quads, abductors, erector spinae, abdominals and core trunk stabiliser to hold position 	<ul style="list-style-type: none"> • Wrist problems: can rest on fists, rather than spread hands • Shoulder or lower back problems: use modifications • Pregnancy: use modifications 	<ul style="list-style-type: none"> • All fours lower and hold • Three-quarter position lower and hold • Hands on a step, chair, or elevated bench to decrease range of motion 	<ul style="list-style-type: none"> • Step, chair or elevated bench
1 Breath	Cobra	<ul style="list-style-type: none"> • Strengthens the erector spinae, glutes, triceps and 	<ul style="list-style-type: none"> • Lower back problems: smaller range of motion or 	<ul style="list-style-type: none"> • Half cobra or sphinx with elbows on the floor 	<ul style="list-style-type: none"> • Towel

		<p>middle, lower trapezius</p> <ul style="list-style-type: none"> • Stretches the abdominals and pectorals and anterior deltoids • Spine mobility 	<p>shins, supported position</p> <ul style="list-style-type: none"> • Pregnancy • Neck problems: look forward, lengthen cervical spine. 	<ul style="list-style-type: none"> • Progressively lift higher • Upward dog 	
3 Breaths	<p>Downward Facing Dog</p> 	<ul style="list-style-type: none"> • Strengthens medial deltoids, biceps and triceps (to lift and hold position) • Stretches hamstrings, glutes, erector spinae, gastrocnemius, latissimus dorsi, pectorals and anterior deltoid • Increase blood flow to brain (inversion) 	<ul style="list-style-type: none"> • Tight hamstrings or lower back: bend knees • Pregnancy: after first trimester use cat pose • Wrist problems: rest hands in fist position to align wrist 	<ul style="list-style-type: none"> • Half downward dog with knees bent • Child's pose • Block under hands • Block under heels • Progress by easing chest closer to thighs and heels closer to floor 	<ul style="list-style-type: none"> • Blocks
1 Breath	<p>High Lunge</p>	<ul style="list-style-type: none"> • Softens the groin and hip muscles. Releasing tension • Relieves backache and sciatica • Relaxes the mind 	<ul style="list-style-type: none"> • Knee injuries • Neck problems (look down at the floor instead of straight ahead) 	<ul style="list-style-type: none"> • The knee of the extended leg can be placed on the floor 	<ul style="list-style-type: none"> • Chair can be used for balance

					
1 Breath	Half Standing Forward Bend 	<ul style="list-style-type: none"> • Strengthens back • Mobility in hips • Lengthens spine • Stretches hamstrings • Improves posture and spine alignment • Strengthens core abdominal and spine muscles 	<ul style="list-style-type: none"> • Back injuries • Knee injuries 	<ul style="list-style-type: none"> • Place hands on a wall or chair, legs perpendicular to the torso, and arms parallel to the floor • Instead of hands to the floor, place them on top of a bolster or two blocks, slightly in front of or beside the feet, to the backs of the ankles 	<ul style="list-style-type: none"> • Wall • Chair • Blocks • Bolster •
1 Breath	Forward Bend 	<ul style="list-style-type: none"> • Lengthens the hamstrings, glutes, erector spinae and gastrocnemius muscles • Strengthens quads and abductors (holding position) 	<ul style="list-style-type: none"> • Lower back pain: use modified position and move slower into and out of position • Low blood pressure: move slower into and out of position 	<ul style="list-style-type: none"> • Knees bent and hands on thighs • Knees bent and chest on thighs • Knees bent and hands on floor. 	<ul style="list-style-type: none"> • Block

		<ul style="list-style-type: none"> • Increases blood flow to the brain 			
1 Breath	<p>Upward Hands Pose</p> 	<ul style="list-style-type: none"> • Strengthens the erector spinae • Stretches and tones the muscles of the abdomen 	<ul style="list-style-type: none"> • Lower back pain • Neck problems 	<ul style="list-style-type: none"> • Knees slightly flexed • Reduce range of back bend at the top of the movement 	<ul style="list-style-type: none"> •
3 Breaths	<p>Mountain Pose</p> 	<ul style="list-style-type: none"> • Improves standing posture, alignment and symmetry • Improves strength of the legs, thighs and core muscles of the trunk • Improves balance <p>Provides mental sense of firmness, grounding, stillness and calming</p>	<ul style="list-style-type: none"> • Weak ankles or balance issues can use wall or chair for support • Dizziness, low blood pressure: use wall or chair for support and reduce length of time holding position statically 	<ul style="list-style-type: none"> • Beginners can stand with back against the wall to raise awareness of posture Wider foot stance (pregnancy, knock knees or foot problems, e.g., bunions) 	<ul style="list-style-type: none"> • Chair or wall
	Forward Bend	<ul style="list-style-type: none"> • Lengthens the hamstrings, glutes, 	<ul style="list-style-type: none"> • Lower back pain: use modified position 	<ul style="list-style-type: none"> • Knees bent and hands on thighs 	<ul style="list-style-type: none"> • Block

<p>3 Breaths</p>		<p>erector spinae and gastrocnemius muscles</p> <ul style="list-style-type: none"> • Strengthens quads and abductors (holding position) • Mobilises spine and hip Preparation for inversions 	<p>and move slower into and out of position</p> <ul style="list-style-type: none"> • Low blood pressure: move slower into and out of position 	<ul style="list-style-type: none"> • Knees bent and chest on thighs • Knees bent and hands on floor. • 	
<p>3 Breaths</p>	<p>Triangle Pose</p> 	<ul style="list-style-type: none"> • Strengthens quads, glutes and lower legs (holding position) • Strengthens core muscles of abdominals and spine • Lengthens and stretches hamstrings, obliques and pectorals in full triangle position 	<ul style="list-style-type: none"> • Lower back mobility problems: use modified position with bent knee and limit ROM • Limited flexibility: use blocks or chair for hand or modified position 	<ul style="list-style-type: none"> • Hand on thigh, rather than elbow (in modified position to decrease ROM) • Progress to straight leg with hand on leg initially • Progress to hand on floor and index finger wrapping around toe 	<ul style="list-style-type: none"> • Blocks or chair

<p>3 Breaths</p>	<p>Tree Pose</p> 	<ul style="list-style-type: none"> • Strengthens quads, glutes, hamstrings, abductors, gastrocnemius and soleus (supporting leg) • Strengthens the trunk and spinal muscles • Stretches adductors and quadriceps (opening hip) • Improves balance • Improves focus and concentration 	<ul style="list-style-type: none"> • High blood pressure: keep arms low • Balance problems: use wall or chair for support • Weak ankles: use wall or chair for support 	<ul style="list-style-type: none"> • Use chair or wall for balance • Foot position: <ul style="list-style-type: none"> ✚ At side of ankle with toes on floor ✚ On calf ✚ Just above knee ✚ Tucked into thigh 	<ul style="list-style-type: none"> • Chair or wall
<p>3 Breaths</p>	<p>Downward Facing Dog</p> 	<ul style="list-style-type: none"> • Strengthens medial deltoids, biceps and triceps (to lift and hold position) • Stretches hamstrings, glutes, erector spinae, gastrocnemius, latissimus dorsi, pectorals and anterior deltoid • Strengthens abdominal and 	<ul style="list-style-type: none"> • Tight hamstrings or lower back: bend knees • Pregnancy: after first trimester use cat pose • Wrist problems: rest hands in fist position to align wrist 	<ul style="list-style-type: none"> • Half downward dog with knees bent • Child's pose • Block under hands • Block under heels • Progress by easing chest closer to thighs and heels closer to floor 	<ul style="list-style-type: none"> • Blocks

		shoulder girdle stabilisers			
3 Breaths	Staff Pose 	<ul style="list-style-type: none"> • Lengthens glutes, hamstrings and erector spinae • Strengthens core muscles of the trunk • Improves seated posture • Assists breathing (open posture) 	<ul style="list-style-type: none"> • Lower back pain: can sit with back against wall 	<ul style="list-style-type: none"> • Seated on blocks to reduce ROM • Hands on blocks if necessary • Slight knee bend for tight hamstrings • Sit against wall for back support 	<ul style="list-style-type: none"> • Blocks • Wall
3 Breaths	Seated Half Spinal Twist 	<ul style="list-style-type: none"> • Stretches obliques and abductors • Opens chest and shoulders • Mobilises spine, hip and knees • Strengthens abdominals and core muscles 	<ul style="list-style-type: none"> • Lower back problems: can twist away from bent leg • Knee problems: lower leg extended • Neck problems: look forward 	<ul style="list-style-type: none"> • Keep lower leg straight • Use hands to bring knee to chest and small rotation • Twist away from bent leg • Sit on a chair and rotate spine 	<ul style="list-style-type: none"> • Chair • Block

<p>3 Breaths</p>	<p>Bridge Pose</p> 	<ul style="list-style-type: none"> • Strengthens quadriceps, glutes, abductors and gastrocnemius • Strengthens spine and core muscles • Lengthens abdominals, pectorals and anterior deltoid • Mobilises spine • Opens hips and shoulders 	<ul style="list-style-type: none"> • Lower back pain: ensure glutes activated and smaller lift or pelvic tilt • Neck issues: smaller ROM, not lifting fully onto shoulders 	<ul style="list-style-type: none"> • Activate glutes and small pelvic tilt • Feet further away from buttocks • Small lift, progress too higher lift • Block between knees to prevent knees from opening outward 	<ul style="list-style-type: none"> • Block
<p>5 mins</p>	<p>Corpse Pose</p> 	<ul style="list-style-type: none"> • Encourages relaxation in the muscles • Nourishes the nervous system, internal organs and calms the mind 	<ul style="list-style-type: none"> • Back injury or spinal discomfort: do this pose with the knees bent and the feet on the floor, or support the bent knees on a bolster • Pregnancy raise the head and chest on a bolster 	<ul style="list-style-type: none"> • For low back pain place a rolled-up blanket or bolster under the knees Raise and support the head with a folded blanket if tilting back 	<ul style="list-style-type: none"> • Block, • Bolster • Towel • Blanket • Eye Cushion

<p>3 Breaths</p>	<p>Easy Pose</p> 	<ul style="list-style-type: none"> • Opens hips • Stretches adductors • Strengthens erector spinae and core abdominals • Improves seated posture • Relieves stress 	<ul style="list-style-type: none"> • Knee injury: legs not so tightly crossed • Tight hips and/or back: sit on block or sit with back against wall 	<ul style="list-style-type: none"> • Sit on block or cushion • Sit against wall 	<ul style="list-style-type: none"> • Wall • Block or cushion
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Appendix 2: Introduction Letter & Scoping Questionnaire (Contains PIS & Consent Form)

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY
1st February 2022

Dear (Principal's Name),

My name is Paul Rutherford and I am a senior lecturer in the Department of Health and Physical Education at Stranmillis University College – please click [here](#) to view my staff profile.

I am currently undertaking a Doctorate of Health Studies (DHS) at Cardiff University. My thesis investigates the potential for **yoga** to enhance **social** and **emotional wellbeing** of Primary School children in Northern Ireland. Therefore, I am emailing to invite you to complete an online questionnaire about the provision or non-provision of yoga in your school which should take approximately 5-10 minutes to complete:

- **Section 1:** Information Sheet
- **Section 2:** Consent Form
- **Section 3:** Questionnaire
- **Section 4:** School Details - provision of these details is optional and even where they are provided, they will only be known to the researcher and will be anonymised with the research study

Please click [here](#) to access the questionnaire.

I appreciate you may have additional queries so please do not hesitate to contact me by phone (02890 384382) or email (p.rutherford@stran.ac.uk) as I welcome the opportunity to answer your questions.

Section 1
INFORMATION SHEET

Research Study: Exploring the potential for **yoga to enhance the **social** and **emotional wellbeing** in Primary School children in Northern Ireland.**

Before you decide whether or not to take part in the questionnaire, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish.

Thank you for reading this.

1. What is the purpose of this research study?

The research study will explore the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland. The main aims of the study are to gain an insight and regional perspective on the potential benefits of yoga to education, children and society.

2. Why have you been invited to take part?

You have been invited to take part because you are the Principal of a Primary School in Northern Ireland.

3. Do I have to take part?

No, your participation is entirely voluntary and it is up to you to decide whether or not to take part. If you decide not to take part, you do not have to explain your reasons. You are free to stop participating at any point during the questionnaire, however after you have submitted your responses they cannot be withdrawn, but please be assured they will not be linked to identifiable data about your school.

4. What will taking part involve?

It will involve you completing a Consent Form, short questionnaire, and optional disclosure of school details.

5. Will my taking part in this research project be kept anonymous and confidential?

All information collected from (or about) you and your school will be kept anonymous and confidential, and any personal information provided will be managed in accordance with data protection legislation. All relevant data will be anonymised immediately after collection, with all key variables such as names, postal addresses, postcodes, and email addresses removed. Only the researcher will be able to trace the identity of the school. All data will be stored securely on my Cardiff University One Drive account within the university IT system; the data will be stored in accordance with the university's Records Management Policy and Records Retention Schedules; the personal computer used to gather the data for the study is password protected.

6. What will happen to my personal data?

All personal data will be anonymised as a Unique Reference Number (URN) will be used for each school and participant

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further information about Data Protection, including:

- your rights
- the legal basis under which Cardiff University processes your personal data for research
- Cardiff University's Data Protection Policy
- how to contact the Cardiff University Data Protection Officer
- how to contact the Information Commissioner's Office

This may be found at <https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>. Participants will be provided with an electronic and hard copy of this document and all other relevant documents at least a week prior to an information session.

7. What happens to the data at the end of the research project?

Findings will be used for the purpose of informing the write up of my doctoral thesis and may also be used to inform academic papers and/or for presentation at academic conferences.

8. Who is supervising and funding this research project?

The research is organised by Paul Rutherford and supervised by Dr Jemma Hawkins and Professor Graham Moore from Cardiff University. The research is currently funded by Stranmillis University College.

9. Who has approved this research project?

This research project has been reviewed and given a favourable opinion by the School of Social Sciences Research Ethics Committee, Cardiff University Ethics Committee. Application and approval code: SREC/4197.

10. Further information and contact details

Should you have any questions relating to this questionnaire, you may contact me during normal working hours:

Paul Rutherford
Department of Health, Physical Activity and Sport,
Orchard Building
Stranmillis University College
Belfast
BT9 5DY

Tel: 028 90384382

Email: P.Rutherford@Stran.ac.uk

Thank you for considering taking part in this questionnaire.

The next section contains a Consent form which must be completed before proceeding to complete the questionnaire. Read through the document and if you have any queries before you give consent, please do not hesitate in contacting me.

[Link to Section 2 \(Consent\)](#)

Section 2 (Consent Form)

CONSENT Form

I understand and agree to the following:

- I confirm that I have read and understood the content in the Information Sheet.
- I understand that my participation is voluntary, and I can stop participating at any time by closing the questionnaire window.
- I consent to the processing of my personal information (my name and email) if I decide to share these.
- I understand that such information will be held in accordance with all applicable data protection legislation and in strict confidence unless disclosure is required by law or professional obligation.
- I understand who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.

I have read the above information and

- I wish to complete the questionnaire ([Link to section 3 – Questionnaire](#))
- I do not wish to complete the questionnaire ([Link to section 9 – Declined Participation](#))

Section 3. Questionnaire (Questions 1-2)

1. Is your school:

- a) Controlled
- b) Maintained
- c) Integrated
- d) Other (please specify via Question 1a.)

1a. If your school is not Controlled, Maintained or Integrated, how would you classify it?

2. Does your school deliver yoga to its pupils?

- a) Yes (If yes go to Q.5)
- b) No (If no go to Q.3)

Section 4 (Yoga Non-participation Schools)

3. Why has your school chosen not to deliver yoga to its pupils? (Please select all that apply)

- a) No trained yoga instructors within the school
- b) No appropriate facility within the school
- c) No availability of facility within the school
- d) No equipment within the school
- e) Unable to be timetabled during the school day
- f) Unable to be timetabled before the school day
- g) Unable to be timetabled after the school day
- h) Lack of pupil interest
- i) Other (please specify via Question 3a.)

3a. If you have answered 'Other' in the previous question, please specify why your school has chosen not to deliver yoga to its pupils.

4. Would you be interested in providing yoga to your pupils in the future?

- a) Yes – no comment (Go to decline page)
- b) Yes – with comment – go to 4a.
- c) No – no comment - (Go to decline page)
- d) No – with comment – go to 4a.
- e) Unsure – no comment - (Go to decline page)
- f) Unsure – with comment – go to 4a.

Section 5 of 16

Comment on possible future yoga provision.

4a. Use this section to comment on your views to the future provision of yoga to the pupils in your school.

Section 6 of 16 (Yoga Participation Schools)

5. What year groups participate in yoga within your school? (please select all that apply)

- a) Year 1
- b) Year 2
- c) Year 3
- d) Year 4
- e) Year 5
- f) Year 6
- g) Year 7

h) Mixed year groups (please specify)

5a. If you have selected 'Mixed year groups' please explain how the year groups are combined to participate in the yoga classes. If you would prefer not to comment please move on to Question 6.

6. Who is the yoga delivered by? (Please select all that apply)

- a) Primary school teacher
- b) Classroom assistant
- c) Outside yoga instructor
- d) Other (please specify who delivers the yoga via question 6a.)

6a. If you have answered 'Other' in the previous question, please specify who delivers the yoga to your pupils.

7. Is the person who delivers the yoga a certified yoga instructor?

- a) Yes **(if yes go to Q8)**
- b) No **(if no go to Q9)**
- c) Do not know **(if do not know go to Q9)**

Section 7 (Certified Yoga Teacher)

8. What yoga teaching qualification does the yoga teacher hold?

- a) A certificate in Teaching Yoga to Children
- b) A certified 200/300/400 or 500 hour Registered Yoga Teacher qualification
- c) Both of the above
- d) Other
- e) Do not know

Section 8 (Questions 9-10)

9. Is yoga delivered during the school day as part of the curriculum?

- a) Yes (go to Q10)
- b) No (go to Q11)

Section 9 – Yoga delivered as part of the curriculum

10. Please specify via which area of learning yoga is delivered.

- a) Physical Education
- b) Personal Development & Mutual Understanding (PDMU)
- c) The Arts
- d) World Around Us (WAU)
- e) Literacy
- f) Numeracy
- g) Religious Education (RE)
- h) Other (please specify)

10a. If you answered 'Other' in the previous question, please specify via what area of learning yoga is delivered.

Section 10 – Yoga delivered as an extra-curricular provision.

11. When is yoga delivered as part of the school's extra-curricular provision (please select all that apply)?

- a) Breakfast club
- b) Lunch time
- c) After-school club

- d) Summer scheme
- e) Other (please specify via Question 11a.)

11a. If you answered 'Other' in the previous question, please specify via what area of the school's extra-curricular activity yoga is delivered.

Section 11 – Quantity of yoga sessions

12. How many yoga sessions per academic year do each group/class receive?

[Link to Section 12 \(Expression of Interest\)](#)

Section 8 (Expression of Interest)

Thank you for taking part in the questionnaire. The results from this will inform the next stage of my research which involves conducting more in-depth case study research with a small number of schools. If you are interested in taking part in the case study research you can express your interest on this page.

At this stage you are only being asked to express an interest in the study and you will be under no obligation to participate any further in the study. The following information may help inform your decision on whether or not you would like to participate in the next stage:

What will taking part in the study as a Case Study school involve?

1. Interviews with school staff including representatives of senior management and classroom teachers / teaching assistants
2. A short online survey of parents/carers of pupils who receive yoga in your school
3. Small group interviews with some of the pupils who participate in yoga in your school

What are the possible benefits of being a Case Study school?

The contribution of you, your staff, and your pupils will have the potential to enhance the social and emotional wellbeing of future Primary School children in Northern Ireland. In addition, to show my appreciation each of the Case Study schools will be offered a free staff development day on a health and/or physical activity-related focus depending on the interests and training needs of the school.

When will the next stage of the study commence?

This is planned for a period between February and June 2022.

If you do express an interest and your school meets the requirements set out to be a Case Study School, I will be in contact with you to provide you with more information.

I am expressing an interest in taking part in the study ([Link to Personal Details page](#))

I do not wish to take part in the study ([Link to Thank you for your interest](#))

Section 9 (Personal Details)

If you wish to express an interest in your school participating as a Case Study, please provide the following information:

Name of School: _____

Your full name: _____

Your full job title: _____

Your contact email: _____

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY
June 2022

Question 3a from the scoping questionnaire stated, “Please specify why your school has chosen not to deliver yoga to its pupils.” **Some of the responses were as follows:**

- Parental objections to yoga/Parents do not wish yoga to be offered
- Parental requests not to engage in Yoga as against religious beliefs
- Opposed to the philosophy/new age spirituality that forms the basis of yoga and this type of meditative activity.
- Yoga is contrary to our Christian beliefs and ethos
- We have other relaxation practices that are not linked to ancient rituals – spirits
- Part of my personal responsibility as a school principal is to help pupils develop a reasoned set of personal attitudes, values and beliefs based on the Christian faith. This is underpinned by the representation of the local churches on our Board of Governors. I believe much of the philosophy/spirituality of yoga and similar meditative practices is at odds with the Christian faith, a view supported by the majority of our Governors and staff. Whilst I wish to help pupils to respect other views and opinions, I take the role of 'gate keeper' seriously and do not want to present world views that could lead to spiritual confusion. If parents choose to send their

children to these activities outside of school that would be a matter for themselves. It is not my intention to enter into a public forum debate about my reservations about meditative practices, rather provide many other ways for us as a school to look after our children's mental health and well-being.

- Personally, I would like to provide yoga, but due to parental pressure and advice from Governors, this will not be possible.

Paul Rutherford
Stranmillis University College
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Belfast, BT9 5DY
June 2022

Primary 7 Small Group Interview Questions

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

E. Experience-narrative of yoga classes:

1. Please tell me how the yoga classes were for you?

Probe:

- Please tell me any stories from the yoga classes.
2. What parts of the classes did you like?

Probe:

- Breathing exercises, warm-ups, games, postures, relaxation/rest pose.
3. Is there anything you would change?
 4. Did you learn anything new in the yoga classes? Any surprises?
 5. Is there anything you would like to learn more about?
 6. If it were possible, would you like to continue the yoga classes?

F. Yoga for mood, stress and self-regulation

1. I'm curious about how yoga might affect students' **stress and mood**. What do you think about this?

Probes:

- As you think about your own experience of yoga and how you felt before and after practicing, do you think that yoga might help with **feeling down or sad**? If yes, how?

- Do you think that yoga might help with **feeling stressed**? If yes, how?
 - Do you think that yoga might help with **feeling anxious**? If yes, how?
2. I'm curious about how yoga might affect students' **behaviours**. What do you think about this?

Probes:

- Do you think yoga might help with **staying calm** during upsetting situations? If yes, how?
 - Do you think yoga might help people **stop and think** before they lose their temper or do something that they'll regret later?
3. I'm also wondering about how yoga might affect the way that students **pay attention**. What do you think about this?

Probes:

- Do you think that yoga might help people **keep their attention in class** even if the subject is boring? (Alerting)
 - Do you think that yoga might help people **pay less attention to distractions** so that they can focus on what's important? (Conflict Monitoring). Example: Choosing to pay attention to a teacher instead of a classmate who is misbehaving during class.
 - Can you think of any situations since the yoga classes started in which these types of things happened?
4. Do you think yoga has had any effect on your ability to do schoolwork? If yes, what types of effects?
5. Do you think yoga has had any effect on your grades or tests? If yes, what types of effects?

G. Yoga and health behaviours

1. Have you noticed any changes in your **health** since starting yoga? If nothing has changed or if something has gotten worse, you can talk about that, too.

Probes:

- Have you noticed any changes in **how you eat?** How **much you eat?** Or in the **types of food** you eat?
- Has the amount of **physical activity** and/or **exercise** that you do changed since you started yoga? If yes, how?
- Has your participation in sports or your interest in playing **sports** changed since you started yoga?

2. How does yoga compare to the other activities you do for Physical Education?

Probes:

- Was yoga more enjoyable than the HIIT or HIIT more enjoyable than yoga?
 - Explain your reasons for your answer
3. If you could replace another physical activity with yoga, which one would it be?

H. Use of yoga in other areas of life.

- I'd be interested to hear about any of the skills that you learned in yoga.
- Have you used these skills in any other areas of your life outside of yoga? Can you tell me an example?
- Have you seen any changes in your friends' behaviour that might be due to the yoga? Any examples?

I. Closure:

- Is there anything else you'd like to say about the yoga classes?
- Do you have any questions?
- How was this interview for you?

Appendix 5: Timeline of COVID-19 Developments and Research Progression

Dates	Decisions/Policies	Dates	Research Development
18/03/2020	All schools are closed to all children except those whose parents are front line/ key workers.		
19/10/2020	1500 confirmed cases of Covid-19 in schools between August and October.		
28/01/2021	After discussions at the beginning of January that schools would return through phased approach, it is announced schools will not return.	04/05/2021	Scoping questionnaire Ethics submission
06/09/2021	Schools opened as normal for first term.	07/06/2021	Scoping questionnaire Ethics approval
30/11/2021	NASUWT urges for early closure of schools for Christmas holidays as a circuit breaker. Also reports some classes have switched to remote learning because there are not enough teachers to cover classes due to sickness/self-isolation.	01/11/2021	Case study ethics submission
04/01/2022	Schools reopen with Covid measures implemented before Christmas. From 6 -13 January 2022, 18,231 children aged 5-19 tested positive for Covid-19.		
17/01/2022	Figures show that half of schools in NI had staff absences in the first week of new term.		
20/01/2022	The Department of Education is to get an extra £40m, the majority of it for Covid-19 related expenses such as the hiring of supply teachers to cover absences.		
01/02/2022	Education figures show that 20% of pupils were absent from school due to Covid-19 in the week beginning 24 January, the highest number of the 2021–22 academic year.	01/02/2022	Scoping questionnaire distributed via Google Forms & MS Outlook to 794 Primary Schools – Return?
15/02/2022	Most Covid-19 Regulations are lifted in NI	24/02/2022	Scoping questionnaire redistributed – Return?
		15/03/2022	Case study ethics approval
		17/06/2022	PS1 – Small group interviews completed

22/06/2022 PS1 – Teacher/Yoga teacher
interviewed via Zoom

29/06/2022 PS2 – Principal interview

06/07/2022 PS1 – Principal interview

08/07/2022 PS2 – Classroom
assistant/Yoga teacher
interview













































VARIATION 1



VARIATION2



VARIATION 3



1



2



3



4



5



6



7



8



9



10



11



12



13



CONSENT FORM - PRINCIPAL

Title of research project: Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

SREC reference and committee: SREC/48 School of Social Sciences Research Ethics Committee

Name of Chief/Principal Investigator: Paul Rutherford

**Please
initial box**

I confirm that I have read the information sheet (PIS Principal Version 3) dated June 2022 for the above research project.	
I confirm that I have understood the information sheet (PIS Principal Version 3) dated June 2022 for the above research project and that I have had the opportunity to ask questions and that these have been answered satisfactorily.	
I understand that my participation is voluntary, and I am free to withdraw at any time without giving a reason and without any adverse consequences (e.g., to medical care or legal rights, if relevant). I am aware that my data will be anonymised once the researcher commences the transcription process. Consequently, I understand that my data can be withdrawn up until the point of transcription through contacting the researcher. I am aware that contact details for the researcher can be found on the Participant Information Sheet (PIS Principal Version 3).	
I understand that data collected during the research project may be looked at by individuals from Cardiff University or from regulatory authorities, where it is relevant to my taking part in the research project. I give permission for these individuals to have access to my data.	

I understand who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.	
I understand how the findings and results of the research project will be written up and published.	
I agree to take part in this research project.	

Name of participant (print)

Date

Signature

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP

CONSENT FORM - TEACHER

Title of research project: Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

SREC reference and committee: SREC/48 School of Social Sciences Research Ethics Committee

Name of Chief/Principal Investigator: Paul Rutherford

**Please
initial box**

I confirm that I have read the information sheet (PIS Teacher Version 3) dated June 2022 for the above research project.	
I confirm that I have understood the information sheet (PIS Teacher Version 3) dated June 2022 for the above research project and that I have had the opportunity to ask questions and that these have been answered satisfactorily.	
I understand that my participation is voluntary, and I am free to withdraw at any time without giving a reason and without any adverse consequences (e.g., to medical care or legal rights, if relevant). I am aware that my data will be anonymised once the researcher commences the transcription process. Consequently, I understand that my data can be withdrawn up until the point of transcription through contacting the researcher. I am aware that contact details for the researcher can be found on the Participant Information Sheet (PIS Teacher Version 3).	
I understand that data collected during the research project may be looked at by individuals from Cardiff University or from regulatory authorities, where it is relevant to my taking part in the research project. I give permission for these individuals to have access to my data.	

I understand who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.	
I understand how the findings and results of the research project will be written up and published.	
I agree to take part in this research project.	

Name of participant (print)

Date

Signature

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY
June 2022

Primary School Principal Interview Questions

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

- 1. How long have you held the position of Primary School Principal?**
- 2. How many years have you been teaching in primary schools?**
- 3. How did your school get involved in yoga?**

Probe:

- Can you tell me how your school used yoga?
- How did this come about?
- What are your views on its use?
- Do you attend yoga practice yourself?

- 4. How have you managed to fit yoga into your school curriculum?**

Probe:

- Where did you place yoga in the Primary School curriculum for best effect?
- Is it used as an extra-curricular activity or integrated across subjects?
- What has helped with this?
- Who teaches the yoga to the children? Are they a qualified yoga teacher?

5. How important do you think it is as a principal to create a climate that is conducive to change within the school setting?

Probe:

- What support did you get from other staff?
- Do you think your staff feel empowered to step forward and take on implementation responsibilities?

6. What barriers did you face in setting up your yoga blocks?

Scoping Question 3: why has your school chosen not to deliver yoga to its pupils?

Responses:

- No trained yoga instructors within the school – 63 (91.3%)
- No appropriate facility within the school – 9 (13%)
- No availability of facility within the school – 10 (14.4%)
- No equipment within the school – 20 (29%)
- Unable to be timetabled during the school day – 11 (15.9%)
- Unable to be timetabled before the school day – 11 (15.9%)
- Unable to be timetabled after the school day – 7 (10.5%)
- Lack of pupil interest – 1 (1.4%)

7. Why did you choose to use yoga with the pupils?

Probe:

- What is it for?
- How do the physical benefits compare to other modes of physical activity you teach?
- How do the mental benefits compare to other modes of physical activity that you teach?
- Did you base your decision to use yoga on existing evidence? Examples?

8. Did you intend to measure the effects of your programme before and/or after you finished? Did the yoga sessions bring about the desired outcomes? E.g., social and emotional related.

Probe:

- By what mechanisms would this work?

- Do you think these outcomes were attained? If not, why not?
- How do you measure the outcomes?

9. Which if any element of the yoga sessions do you think had the greatest impact on the children?

Probe:

- Breathing/Poses/Relaxation/Mindfulness/Games/Other
- Why?

10. Has yoga had an impact in any other way?

- Examples?
- Any comments from the other teachers or staff in relation to the effects of the yoga on the children?

11. What were the views of other staff to your use of yoga with the children?

Probe:

- Any visible change to student behaviour?
- Views before the programme?
- Views after the programme?
- How important is it to you to have the support/buy-in of other stakeholders, such as, the School Governors, Teachers, Classroom Assistants and Parents?
- Any particular comments from the stakeholders?

12. How would you run a future yoga programme in a school setting?

Probe:

- What would you change and why?

13. How important do you think it is for the children to take part in physical activity in the primary school setting?

Probe:

- Do you know what the minimum recommended time for curricular PE per week is in Northern Ireland primary schools?
- Do the children normally attain that?
- How would you rate yoga in comparison to other modes of physical activity/games offered at the school?
- Would you see yoga as a replacement or as a supplementation to other modes of physical activity/games?

14. Responses from the Scoping Questionnaire suggest that some schools have not and will not use yoga due to their religious beliefs. Please read through the document titled, 'SQ3a Responses with religious connotations.'

Probe:

- What would your view be on yoga and religion?
- What would be your schools/colleagues views be on yoga and religion?
- What advice would you give to those that would not use yoga due to religious beliefs?

15. Based on your own experience, what advice would you give to other schools to help support them to use yoga?

16. Any other comments on your experience of delivering yoga in the primary school setting?

17. How was the interview for you?

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June 2022

Teacher Interview Questions

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

18. How many years have you been teaching in primary schools? How many schools?

19. How did you get involved in yoga? Do you attend yoga practice yourself?

20. What yoga teaching qualification do you hold?

Probe:

- Do you intend to complete CPD in this area?

21. What are your views on yoga and its use within your school?

Probe:

- Can you tell me how your school used yoga?
- How did this come about?
- What are your views on its use?

22. Why have you chosen to use yoga with the pupils?

Probe:

- What is it for?
- How do the physical benefits compare to other modes of physical activity you teach?
- How do the mental benefits compare to other modes of physical activity that you teach?
- Did you base your decision to use yoga on existing evidence? Examples?

23. Did you intend to measure the effects of your programme before and/or after you finished? Did the yoga sessions bring about the desired outcomes? E.g., social and emotional related.

Probe:

- By what mechanisms would this work?
- Do you think these outcomes were attained? If not, why not?
- How do you measure the outcomes?

24. Which if any element of your sessions do you think had the greatest impact on the children?

Probe:

- Breathing/Poses/Relaxation/Mindfulness/Games/Other
- Why?

25. Has yoga had an impact in any other way?

- Examples?
- Any comments from the other P7 teachers or staff in relation to the effects of the yoga on the children?

26. How have you managed to fit yoga into your school curriculum?

Probe:

- Where would you place yoga in the Primary School curriculum for best effect?
- What support did you get from other staff/Principal/Vice Principal?
- What barriers did you face in setting up your yoga blocks?

27. What were the views of other staff/Principal/Vice Principal to your use of yoga with the children?

Probe:

- Any visible change to student behaviour?
- Views before the programme?
- Views after the programme?
- How important is it to you to have the support/buy-in of other stakeholders, such as, the Principal, Teachers, Classroom Assistants and Parents?
- Any particular comments from the stakeholders?

28. How would you run a future yoga programme in a school setting?

Probe:

- What would you change and why?

29. How important do you think it is for the children to take part in physical activity in the primary school setting?

Probe:

- Do you know what the minimum recommended time for curricular PE per week is in Northern Ireland primary schools?
- Do the children normally attain that?

- How would you rate yoga in comparison to other modes of physical activity/games offered at the school?
- Would you see yoga as a replacement or as a supplementation to other modes of physical activity/games?

30. Responses from the Scoping Questionnaire suggest that some schools have not and will not use yoga due to their religious beliefs. Please read through the document titled, 'SQ3a Responses with religious connotations.'

Probe:

- What would your view be on yoga and religion?
- What would be your schools/colleagues' views be on yoga and religion?
- What advice would you give to those that would not use yoga due to religious beliefs?

31. Based on your own experience, what advice would you give to other schools to help support them to use yoga?

32. Any other comments on your experience of delivering yoga in the primary school setting?

33. How was the interview for you?

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July 2022

Classroom Assistant/Yoga Teacher Interview Questions

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

34. How many years have you been a classroom assistant in primary schools? How many schools?

35. What was your main job before this?

36. How did you get involved in yoga? Do you attend yoga practice yourself?

37. What yoga teaching qualification do you hold?

Probe:

- Do you intend to complete CPD in this area?

38. What are your views on yoga and its use within your school?

Probe:

- Can you tell me how your school used yoga?
- How did this come about?
- What are your views on its use?

39. Why have you chosen to use yoga with the pupils?

Probe:

- What is it for?
- How do the physical benefits compare to other modes of physical activity you teach?
- How do the mental benefits compare to other modes of physical activity that you teach?
- Did you base your decision to use yoga on existing evidence? Examples?

40. Did you intend to measure the effects of your programme before and/or after you finished? Did the yoga sessions bring about the desired outcomes? E.g. social and emotional related.

Probe:

- By what mechanisms would this work?
- Do you think these outcomes were attained? If not, why not?
- How do you measure the outcomes?

41. Which if any element of your sessions do you think had the greatest impact on the children?

Probe:

- Breathing/Poses/Relaxation/Mindfulness/Games/Other
- Why?

42. Has yoga had an impact in any other way?

- Examples?

- Any comments from the other P7 teachers or staff in relation to the effects of the yoga on the children?

43. How have you managed to fit yoga into your school curriculum?

Probe:

- Where would you place yoga in the Primary School curriculum for best effect?
- What support did you get from other staff/Principal/Vice Principal?
- What barriers did you face in setting up your yoga blocks?

44. What were the views of other staff/Principal/Vice Principal to your use of yoga with the children?

Probe:

- Any visible change to student behaviour?
- Views before the programme?
- Views after the programme?
- How important is it to you to have the support/buy-in of other stakeholders, such as, the Principal, Teachers, Classroom Assistants and Parents?
- Any particular comments from the stakeholders?

45. How would you run a future yoga programme in a school setting?

Probe:

- What would you change and why?

46. How important do you think it is for the children to take part in physical activity in the primary school setting?

Probe:

- Do you know what the minimum recommended time for curricular PE per week is in Northern Ireland primary schools?
- Do the children normally attain that?
- How would you rate yoga in comparison to other modes of physical activity/games offered at the school?
- Would you see yoga as a replacement or as a supplementation to other modes of physical activity/games?

47. Responses from the Scoping Questionnaire suggest that some schools have not and will not use yoga due to their religious beliefs. Please read through the document titled, 'SQ3a Responses with religious connotations.'

Probe:

- What would your view be on yoga and religion?
- What would be your schools/colleagues' views be on yoga and religion?
- What advice would you give to those that would not use yoga due to religious beliefs?

48. Based on your own experience, what advice would you give to other schools to help support them to use yoga?

49. Any other comments on your experience of delivering yoga in the primary school setting?

50. How was the interview for you?

Appendix 12: NVivo List of Initial Codes

1	Name	Files	References
2	Yoga in the NI Curriculum	7	82
3	PE	6	16
4	Positive comments on yoga participation from the children	7	80
5	Points on any future Yoga Intervention	7	78
6	Key Quotes & Annotation	7	64
7	School Dynamics	4	51
8	Health & Wellbeing	5	47
9	Religion	5	44
10	Focus and Concentration Positive	7	43
11	Positive Emotions.	6	42
12	Emotional Regulation	7	40
13	Effects on Stress and Anxiety	7	72
14	Anger	3	10
15	Self-Regulation	3	5
16	Yoga and Social & Emotional Wellbeing	6	39
17	Logistics or Resources	5	37
18	Yoga Qualifications & Experience	5	34
19	Social Constructionism	4	24
20	Yoga Compared to other modes of Physical Activity	5	23
21	Measuring the Impact of Yoga	4	23
22	The inclusion and importance of fun	4	19
23	Yoga in other areas of life	3	17
24	COVID 19	4	17

Specific reasons for not providing yoga in the future

1. It would be great to have access to someone who could either deliver yoga sessions or train staff to deliver beneficial yoga activities. We have a lot of SEN and particularly ADHD and Behavioural issues connected to it.
 2. Definitely interested but unable to facilitate due to lack of suitable accommodation
 3. It would have to external facilitator
 4. we have yoga for adults at night would love to start during the day for pupils
 5. We have significant support in place for wellbeing and teachers are under significant pressure. I am wary about adding something else into the programme that will require more training. We can get to the point of overload.
-
6. Part of my personal responsibility as a Controlled school principal is to help pupils develop a reasoned set of personal attitudes, values and beliefs based on the Christian faith. This is underpinned by the representation of the local churches on our Governors. I believe much of the philosophy/spirituality of yoga and similar meditative practices is at odds with the Christian faith, a view support by the majority of our Governors and staff. Whilst I wish to help pupils to respect other views and opinions, I take the role of 'gate keeper' seriously and do not want to present world views that could lead to spiritual confusion. If parents choose to send their children to these activities outside of school that would be a matter for themselves. It is not my intention to enter into a public forum debate about my reservations about meditative practices, rather provide many other ways for us as a school to look after our children's mental health and well-being.
 7. Personally, I would like to provide yoga, but due to parental pressure and advice from Governors, this will not be possible.
-
8. I practice yoga myself and understand the benefits. I believe the children would definitely benefit.
 9. I would need more information on the benefits of yoga
 10. I think it might be something that could help their mental and physical health.
 11. Relax Kids practitioner does other similar relaxation/well-being activities
-

Appendix 14: Composition of Board of Governors in NI Primary Schools

Education Authority governor	Appointed by EA
Department of Education governor	Nominated or appointed by DE as appropriate to a range of schools
Transferor governor	Normally nominated by the churches in the locality served by the school. Appointed to controlled schools only*
Parent governor	Elected by parents of pupils at the school
Teacher governor	Elected by the teaching staff at the school
Principal	Non-voting executive member of board of governors and normally Secretary to the board of governors although this is not mandatory

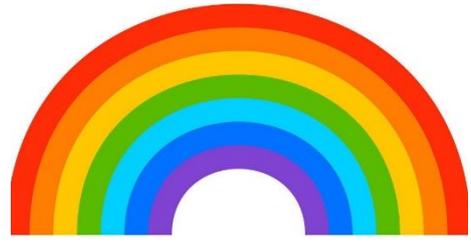
***Controlled Integrated Schools will have both Transferor and Trustee governors**

Co-opted governor - A board of governors can consider the co-option of governors as a means to extend its competences in specific aspects of school governance. Co-opted members do not have a vote on the board of governors.

The exact membership composition for each type of school is laid down in legislation and in the Scheme of Management for the school.

Source: NI Education Authority (2023) Membership Explained. Available at:

<https://www.eani.org.uk/school-governance/membership-explained> [Accessed 19/08/2023]



Story Name:

End of the Rainbow

Key Learning Objectives

To learn the colours of the rainbow

To understand the story

Physical Benefits

Moving the body in various shapes

Exercising the vocal cords

Props

Coloured circles that we can relate to colours of the rainbow

Shakers

Rainbow Song on wall

Tune-in/Warm-ups

Our story starts in a green field. While we are in the field it starts to rain (**body drumming**) starting from the top of the head down to the feet then after the rain we can hear loud noises in the distance oh no its thunder (**lie down and hug knees into chest and roll side to side**) and then we hear the lightening (**bow and arrow**) with sound effects for the lightening.

Yoga Story

We continue walking through the field and we meet some trees (**tree Pose**) while in this pose let's think of the colour red rooted to the earth. We walk on over the fields and meet a happy farmer (**garland pose**) with a big smiley face and we think of the colour orange in this pose as we do a lovely wide-open pose with a happy face. On our adventures in the field, we meet a wobbly scarecrow (**triangle pose**) and while in this pose, we think of the colour yellow and how the scarecrow has eaten too much that he is wobbly and fallen over.

We stop and look ahead and we can see a bridge we decide to go over the bridge so let's come down on our mat and slowly lift into (**bridge pose**) keeping hands by your side think of your heart in this pose being lifted up and turning green. Underneath the bridge we can hear hissing sounds "I wonder what it could be" slowly lower from the bridge and roll over onto your tummy and come into (**cobra/snake pose**) and think of your throat being lifted up to the sky and turning light blue we can do the hissing sound of the snake while in this pose.

On the other side of the bridge, we see more animals and sitting on top of a big tree we see an (**eagle**) let's sit down on our mat and cross our legs and take our arms into the eagle pose and try to position our hands between the eyes and we think of the colour dark blue. We are nearly at the end of our adventure and we see a house we decide to go in for cover lets come into (**child's pose**) and cover our head with our hands let's think of the colour violet in this pose.

We are all happy now that we have reached the end of the rainbow, we decide to pick our favourite pose and one by one we go around everybody in the room and they do their favourite pose on the mat.

Bring everyone down to cross legged position on the mat and gave everyone a shaker.

Relaxation/Visualisation

Sing the Rainbow song with a lovely loud voice and then the second time sing in a nice quiet voice. Use the shaker when singing

Games/Meditation/Song Rainbow Song



Red and yellow and pink and green

Purple and orange and blue

I can sing a rainbow

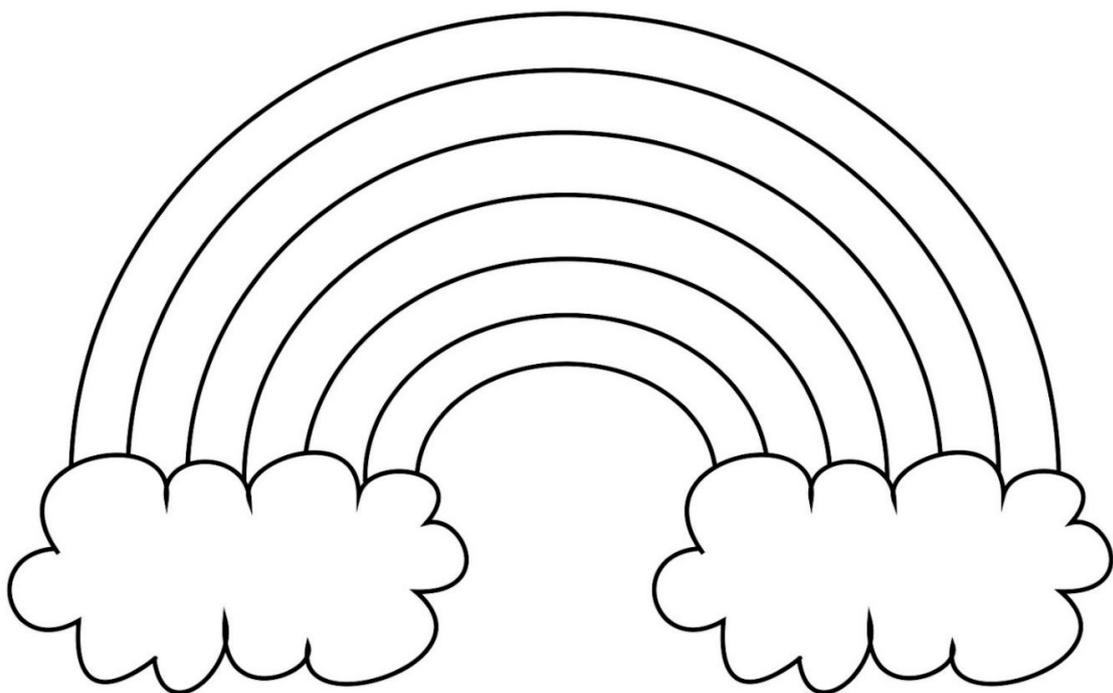
Sing a rainbow

Sing a rainbow too

End

Sit comfortably, hands at your heart, take one deep breath together, and finish by saying: 'I am calm, I am strong, I am kind.'

Give the children a copy of the rainbow to take home and colour in.



Appendix 16: Short (5-15-minute) Classroom-Based Mindful Yoga Break

Short (5 – 15 minute) Classroom-Based Mindful Yoga Break (7–11 Years)

Time: 5–15 minutes

Setting: Beside desks or in a cleared space

Props: None needed

1. Centring and Breath Awareness (2 minutes)

Cue: “Sit tall in your chair with both feet flat on the floor. Imagine a string lifting the top of your head toward the ceiling.”

Activity:

- Close or softly focus the eyes.
- Take 3 deep breaths together: inhale through the nose (count to 4), exhale through the mouth (count to 6).
- Place a hand on the belly to feel it rise and fall with each breath.

Mindfulness Tip: “Notice the air moving in and out, like waves.”

2. Seated or Standing Gentle Stretches (5 minutes)

- **Neck Rolls:** Slow circles, 3 in each direction.
- **Shoulder Rolls:** Lift shoulders to ears and roll them back and down, 5 times.
- **Side Stretch:** Reach right arm up, lean to the left; switch sides.
- **Seated Cat-Cow:**
 - **Cat:** Round the back, chin to chest.
 - **Cow:** Arch the back, lift the chest.
- **Mountain Pose (Standing):**
 - Stand tall, feet hip-width apart, arms by sides.
 - Imagine growing roots from feet into the ground.
 - Inhale, lift arms up; exhale, lower them.

3. Simple Balancing Pose (2–3 minutes)

- **Tree Pose (adapted):**
 - Shift weight onto the left foot.
 - Place right foot lightly on left ankle or calf.
 - Hands together at chest or arms stretched up.
 - Focus on a still point ahead.
 - Hold for 3–5 breaths, then switch sides.

Mindfulness Tip: “Feel steady like a tree in the breeze.”

4. Mini Guided Relaxation (3–5 minutes)

Cue: “Sit comfortably or lie back with hands resting on your lap.”

Script Example: “Close your eyes if you like. Imagine you are lying in a warm meadow. Feel the sun on your face and the gentle breeze around you. With each breath in, fill your body with calm; with each breath out, let go of any worries.”

- Breathe slowly together for 1–2 minutes.
- **Optional:** End with a “gratitude thought” — think of one thing they’re thankful for today.

5. Closing (30 seconds)

- **Cue:** “Slowly wiggle your fingers and toes, gently open your eyes.”
- Invite a big stretch up to the ceiling and a soft sigh out.
- Smile together to end.

Key Principles:

- Simple language.
- Short holds.
- Focus on breath.
- Offer choices for inclusion.

Mindful Listening Activity: “The Sound Safari”

Time: 5–10 minutes

Age Range: 6–12 years

Setting: At desks or seated comfortably on the floor

Props: None (optional: a soft chime or bell)

Activity Steps:

1. Settle and Centre (1–2 minutes)

- Sit quietly, feet flat on the floor, hands resting in the lap.
- Invite children to close their eyes or lower their gaze.
- **Cue:**

“Take a slow breath in through your nose... and slowly out through your mouth. Let’s do those three times.”

2. Introduction to Sound Safari (1 minute)

- **Explain:**

“We’re going on a Sound Safari. Sit very still and listen closely—not for the loud sounds, but for the tiny, quiet sounds we don’t usually notice.”

- Encourage them to imagine they are sound detectives or adventurers.

3. Mindful Listening (3–5 minutes)

- **Cue:**

“Keep sitting very still and listen. Can you hear the hum of the lights? The rustle of clothes? Birds outside? Cars far away?”

- Optional: Start with a soft chime or bell, asking them to listen until the sound fades completely.

- Gently remind them to bring their attention back to listening if their mind wanders.

4. Reflection and Sharing (2 minutes)

- Invite children to open their eyes.
- **Ask:**

“What was the quietest sound you noticed?”

“Did you hear something you hadn’t noticed before?”

- Encourage a few volunteers to share if they wish.

Mindfulness Takeaway

“When we stop and listen carefully, we notice all kinds of things we usually miss. Mindful listening helps us stay calm and focused.”

Adaptation Tips:

- **Younger Children (6–8 years):** Keep listening time to 2–3 minutes.
- **Older Children (9–12 years):** Extend silent listening to 5 minutes. Optionally add a drawing activity: “Draw a picture of your Sound Safari!”

Note: Repeat weekly to build attention and listening skills over time.

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June 2022

Participant Information Sheet - Principal

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

Dear,

You are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish.

Thank you for reading this.

11. What is the purpose of this research project?

I am a full-time lecturer working at Stranmillis University College, Belfast and I am currently undertaking a Doctorate of Education (EdD) within the School of Social Sciences at Cardiff University. As part of my thesis research study, I hope to explore the potential for yoga to enhance the social emotional wellbeing in Primary School children in Northern Ireland. The 3 main aims of the research are to gain an insight and perspective on;

- i) How yoga is currently being used in Primary Schools in Northern Ireland
- ii) The perspectives of School Principals, teachers and pupils regarding the existing use of yoga in Primary Schools.
- iii) How yoga might help to enhance social emotional wellbeing of Primary School children and how it might best be implemented in schools across Northern Ireland.

In order to explore these aims, I am looking to work with two case study schools who currently deliver yoga.

12. Why have I been invited to take part?

You have been invited because you expressed an interest in being a case study school as part of a previous survey and because your Primary School provides yoga classes for years 5-7.

13. Do I have to take part?

No, your participation in this research project is entirely voluntary and it is up to you to decide whether or not to take part. If you decide for your school to take part, we will discuss the research project with you and ask you to consent to:

- a) Your school participating in the study
- b) Your participation in the study

If you decide not to take part, you do not have to explain your reasons and it will not affect your legal rights. You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the Consent Form.

14. What will taking part involve?

We would like your school to take part in the research as a case study school. This will involve several different types of participation.

Firstly, it will involve you taking part in a one-to-one audio recorded interview to assist me in my research. The interview should take no longer than 60-minutes to complete and it will range across issues related to how yoga is currently being used in Primary Schools in Northern Ireland, and your own personal views on and experiences of the use of yoga in your Primary School. I will adhere to current Northern Ireland COVID-19 restrictions and guidelines; and I will also liaise with you and your school and follow your specific COVID-19

guidelines and policies. In the event of a change to the current guidelines arrangements will be made to facilitate online interviews.

Secondly, I would like your permission for the parents/guardians of the year groups involved in yoga to complete a short survey based on the perceived benefits of incorporating yoga into classroom teaching. It will be made clear to the potential participants that although you have given consent for the research to proceed, they are under no obligation to participate and they will not suffer any adverse consequences should they decline the invitation.

Thirdly, I would like your permission to ask teachers, Health and Wellbeing leads, and classroom assistants of the year groups involved in yoga if they would be willing to participate in one-to-one interviews. It will be made clear to the potential participants that although you have given consent for the research to proceed, they are under no obligation to participate and they will not suffer any adverse consequences should they decline the invitation. The interviews should take no longer than 60-minutes.

Finally, I would like your permission to ask the pupils from the year groups involved in yoga if they would be willing to take part in small-group interviews (4-7 per group). The small-group interviews should take no longer than 45-minutes. Small-group interviews with children will only take place when both parental and child consent has been given. It will be made clear to the children that although you have given consent for the research to proceed, they are under no obligation to participate, and they will not suffer any adverse consequences should they decline the invitation.

Parents are free to withdraw their consent for their children to participate in the research project at any time, without giving a reason, even after signing the consent form. Participant data can be withdrawn through contacting the researcher, contact details for the researcher can be found at the end of this document. Due to the nature of the group interviews it may not be possible to identify any child's individual contribution to the audio recordings, therefore, it will not be possible to withdraw the data after the recordings have been made. However, parents and participants will be made aware of this on each Participant Information sheet (PIS). Furthermore, parents will be made aware that data will be anonymised once the researcher commences the transcription process.

If you agree to consent for your school to take part in the study, all proposed participants will be provided with an information sheet and consent form. Furthermore, an information session will be provided for all participants to allow for further explanation and to answer any questions that they may have. All interviews will be recorded though all responses imparted during the interview will remain completely confidential and neither the school, nor any individual participant will be named and/or be identifiable in the final transcript of the thesis. However, if information of an illegal nature is disclosed then it will be passed on to the relevant authority.

15. What are the possible benefits of taking part?

The results of this study may not benefit you directly. However, we hope that the information we get from this study will help us to better understand if yoga the potential to enhance the social-emotional wellbeing of future Primary School children in Northern Ireland. Furthermore, a Staff Development Day will be offered to your school by the researcher as a way of thanking you and your staff for participation in the study. All school staff will be offered the training and not just those who took part in the study as this will help ensure that teachers do not feel pressurised into participating in the study. The staff development day will be delivered by the researcher who is employed as a lecturer in Stranmillis University College which specialises in initial teacher education. Given the researcher's specialisms, the course is likely to focus on physical activity and teacher health and wellbeing and/or physical literacy. The course will be delivered after all data has been collected on a day and time suitable to school management, ideally this would be on a day already set aside as a staff development day.

16. What are the possible risks of taking part?

- i) **Covid-19 transmission between Researcher and Principal** – Current Government Covid-19 recommendations will be adhered to in order to decrease risk of transmission.

- ii) **Psychological risk to children through upset.** To help avoid any undue stress to the children, small group interviews will be used as they are viewed as one of the most child friendly approaches in children's research. Furthermore, the children will be placed in Friendship groups as this tends to allow the children to be more relaxed and comfortable in their conversation with their classmates. The researcher has many years' experience of working with children and has completed his Child Protection training.

- iii) **Safeguarding issues** – The researcher has completed his Safeguarding Children training and will liaise with the schools Designated Safeguarding Officer (DSO) if any relevant matters arise.

- ii) **Staff and/or pupils feeling obligated to take part in the research** - The relevant PIS will refer to the voluntary nature of the research by assuring the participant that they can withdraw their consent to participate at any time either before or after signing the Consent Form without giving reason and without adverse consequences. This will be reiterated during the information sessions which will be held without the presence of school management.

- iv) **Breach of confidentiality** - The school and participants will be coded using a Unique Reference Number (URN) comprising a number and a letter respectively, e.g., 1A refers to teacher 1 from school A. The URN will be used on all unpublished and unpublished recording forms throughout the study. Participants may refer to children or other members of staff by name throughout the recorded interviews; however, their real names will be replaced by pseudonyms in all published and unpublished documentation. Although the use of URN's and pseudonyms should anonymise identities from the general public, there is the risk that participants may be traceable and identifiable by other staff from the participating school. This will be

disclosed to all participants before they consent via the Information sessions and the Participant Information Sheets.

17. Will my taking part in this research project be kept confidential?

All information collected from (or about) you, your school and any other participants during the research project will be kept confidential and any personal information provided will be managed in accordance with data protection legislation. Please see 'What will happen to my Personal Data?' (below) for further information.

18. What will happen to my Personal Data?

All personal data will be anonymised. A Unique Reference Number (URN) will be used for each school and participant e.g., 1Pr will refer to the Principal from School 1;

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further information about Data Protection may be found at <https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>. Participants will be provided with an electronic and hard copy of this document and all other relevant documents at least a week prior to an information session.

After transcription the researcher will anonymise all the personal data it has collected from, or about, you in connection with this research project, with the exception of your consent form. Your consent form and anonymised data will be retained for a minimum of 1-year after final submission of the thesis.

You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the consent form. There will be no adverse

consequences for anyone choosing to withdraw from the research. Information that has already been obtained may be kept by Cardiff University. Such information will be held in accordance with all applicable data protection legislation and in strict confidence, unless disclosure is required by the law or professional obligation.

19. What happens to the data at the end of the research project?

Findings will be used for the purpose of informing the write up of my doctoral thesis and may also be used to inform academic papers and/or for presentation at academic conferences.

20. What will happen to the results of the research project?

Results of the research will be published in my final thesis towards the end of 2023 and a copy of this can be obtained through contacting the researcher by email. It is not the intention of the researcher to publish the results in academic journals. However, it is likely the results will be used to inform academic papers and/or for presentation at academic conferences. Verbatim quotes from participants will be used in the final published transcript, however, all personal data will be anonymised.

21. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact me directly at: p.rutherford@stran.ac.uk. If you feel your complaint has not been handled satisfactorily or you do not want to contact me directly you may contact a member of my supervision team; Dr Jemma Hawkins, HawkinsJ10@cardiff.ac.uk or, Professor Graham Moore, MooreG@cardiff.ac.uk. If you wish to contact someone independent from the research team, you can contact the School of Social Sciences Research Ethics Committee at Cardiff University), socsi-ethics@cardiff.ac.uk

22. Who is organising and funding this research project?

The research is organised by Paul Rutherford and supervised by Dr Jemma Hawkins and Professor Graham Moore. The research is currently self-funded by Paul Rutherford.

23. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the School of Social Sciences Research Ethics Committee, Cardiff University Ethics Committee.

24. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Paul Rutherford
Department of Health, Physical Activity and Sport,
Orchard Building
Stranmillis University College
Belfast
BT9 5DY

Tel: 028 90384382

Email: P.Rutherford@Stran.ac.uk

Thank you for considering to take part in this research project. If you decide to participate, you will be given a copy of the Participant Information Sheet and a signed consent form to keep for your records.

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY
June 2022

Participant Information Sheet for Teachers

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

You are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish.

Thank you for reading this.

1. What is the purpose of this research project?

I am a full-time lecturer working at Stranmillis University College, Belfast and I am currently undertaking a Doctorate of Education (EdD) within the School of Social Sciences at Cardiff University. As part of my thesis research study, I hope to explore the potential for yoga to enhance the social emotional wellbeing of Primary School children in Northern Ireland. The three main aims of the research are to gain an insight and perspective on;

- iv) How yoga is currently being used in Primary Schools in Northern Ireland
- v) The perspectives of School Principals, teachers and pupils regarding the existing use of yoga in Primary Schools.
- vi) How yoga might help to enhance the social and emotional wellbeing of Primary School children and how it might best be implemented in schools across Northern Ireland.

In order to explore these aims, I am looking to work with two case study schools who currently deliver yoga.

2. Why have I been invited to take part?

You have been invited because your principal expressed an interest in being a case study school as part of a previous survey and because your Primary School provides yoga classes for its pupils.

3. Do I have to take part?

No, your participation in this research project is entirely voluntary and it is up to you to decide whether or not to take part. If you decide to take part, we will discuss the research project with you and ask you to consent to your participation in the study.

4. What will taking part involve?

It will involve you taking part in a one-to-one audio-recorded interview to assist me in my research. The interview should take no longer than 60-minutes to complete and it will range across issues related to how yoga is currently being used in Primary Schools in Northern Ireland, and your own personal views on and experiences of the use of yoga in your Primary School.

Once you have given consent for the research to proceed, you are under no obligation to participate, and you will not suffer any adverse consequences should you decline the invitation. You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the consent form. Participant data can be withdrawn through contacting the researcher, contact details for the researcher can be found at the end of this document. However, it will not be possible to withdraw your data after transcription as all data will be anonymised once the researcher commences the transcription process.

5. What are the possible benefits of taking part?

The results of this study may not benefit you directly. However, we hope that the information we get from this study will help us to better understand if yoga the potential to enhance the social and emotional wellbeing of future Primary School children in Northern Ireland. Furthermore, a Staff Development Day will be offered to your school by the researcher as a way of thanking you for participation in the study. All school staff will be offered the training and not just those who took part in the study as this will help ensure that you do not feel

pressurised into participating in the study. The staff development day will be delivered by the researcher who is employed as a lecturer in Stranmillis University College which specialises in initial teacher education. Given the researcher's specialisms, the course is likely to focus on physical activity and teacher health and wellbeing and/or physical literacy. The course will be delivered after all data has been collected on a day and time suitable to school management, ideally this would be on a day already set aside as a staff development day.

6. What are the possible risks of taking part?

- i) **Covid-19 transmission between Researcher and Teacher** – Current Government Covid-19 recommendations will be adhered to in order to decrease risk of transmission.

- ii) **Breach of confidentiality** - The school and participants will be coded using a Unique Reference Number (URN) comprising a number and a letter respectively, e.g., 1A refers to teacher 1 from school A. The URN will be used on all published and unpublished recording forms throughout the study. Participants may refer to children or other members of staff by name throughout the recorded interviews; however, their real names will be replaced by pseudonyms in all published and unpublished documentation. Although the use of URN's and pseudonyms should anonymise identities from the general public, there is the risk that participants may be traceable and identifiable by other staff from the participating school.

7. Will my taking part in this research project be kept confidential?

All information collected from (or about) you, your school and any other participants during the research project will be kept confidential and any personal information provided will be managed in accordance with data protection legislation. Please see 'What will happen to my Personal Data?' (below) for further information.

8. What will happen to my Personal Data?

All personal data will be anonymised. A Unique Reference Number (URN) will be used for each school and participant e.g., 1TA will refer to Teacher A from school 1.

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further

information about Data Protection may be found at <https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>. Participants will be provided with an electronic and hard copy of this document and all other relevant documents at least a week prior to an information session.

All interviews will be recorded though all responses imparted during the interview will remain completely confidential and neither the school, nor any individual participant will be named and/or be identifiable in the final transcript of the thesis. However, if information of an illegal nature is disclosed then it will be passed on to the relevant authority. After transcription the researcher will anonymise all the personal data it has collected from, or about, you in connection with this research project, with the exception of your consent form. Your consent form and anonymised data will be retained for a minimum of 1-year after final submission of the thesis.

You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the consent form. There will be no adverse consequences for anyone choosing to withdraw from the research. Information that has already been obtained may be kept by Cardiff University. Such information will be held in accordance with all applicable data protection legislation and in strict confidence, unless disclosure is required by the law or professional obligation.

9. What happens to the data at the end of the research project?

Findings will be used for the purpose of informing the write up of my doctoral thesis and may also be used to inform academic papers and/or for presentation at academic conferences.

10. What will happen to the results of the research project?

Results of the research will be published in my final thesis towards the end of 2023 and a copy of this can be obtained through contacting the researcher by email. It is not the intention of the researcher to publish the results in academic journals. However, it is likely the results will be used to inform academic papers and/or for presentation at academic conferences. Verbatim quotes from participants will be used in the final published transcript, however, all personal data will be anonymised.

11. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact me directly at: p.rutherford@stran.ac.uk. If you feel your complaint has not been handled satisfactorily or you do not want to contact me directly you may contact a member of my supervision team; Dr Jemma Hawkins, HawkinsJ10@cardiff.ac.uk or, Professor Graham Moore, MooreG@cardiff.ac.uk. If you wish to contact someone independent from the research team, you can contact the School of Social Sciences Research Ethics Committee at Cardiff University), socsi-ethics@cardiff.ac.uk

12. Who is organising and funding this research project?

The research is organised by Paul Rutherford and supervised by Dr Jemma Hawkins and Professor Graham Moore. The research is currently self-funded by Paul Rutherford.

13. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the School of Social Sciences Research Ethics Committee, Cardiff University Ethics Committee.

14. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Paul Rutherford
Department of Health, Physical Activity and Sport,
Orchard Building
Stranmillis University College
Belfast, BT9 5DY
Tel: 028 90384382
Email: P.Rutherford@Stran.ac.uk

Thank you for considering to take part in this research project. If you decide to participate, you will be given a copy of this Participant Information Sheet and a signed consent form to keep for your records.

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY
June 2022

Participant Information Sheet for Parents

Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

Dear Parent,

You and your child are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others, if you wish.

Thank you for reading this.

1. What is the purpose of this research project?

I am a full-time lecturer working at Stranmillis University College Belfast, and I am currently undertaking a Doctorate of Education (EdD) within the School of Social Sciences at Cardiff University. As part of my thesis research study, I hope to explore the potential for yoga to enhance the social emotional wellbeing of Primary School children in Northern Ireland. The main aims of the research are to gain an insight and perspective on;

- vii) How yoga is currently being used in Primary Schools in Northern Ireland
- viii) How yoga might help to enhance the social and emotional wellbeing of Primary School children and how it might best be implemented in schools across Northern Ireland.

2. Why have I been invited to take part?

You have been invited because your child's primary school Principal expressed an interest in her school participating in the study, and because your child has taken part in yoga classes at the primary school.

3. Do I have to take part?

No, you and your child's participation in this research project are entirely voluntary and it is up to you to decide whether or not to take part. If you or your child decide to take part, we will discuss the research project with you and ask you to consent to your participation in the study.

4. What will taking part involve?

It will involve you completing a short questionnaire and your child taking part in a small-group interview (4-7 per group). The small-group interview should take no longer than 45-minutes. Small-group interviews with children will only take place when both your parental consent and your child's consent have been given. Even when you and your child have given consent for the research to proceed, you are under no obligation to participate, and you will not suffer any adverse consequences should you decline the invitation.

You are free to withdraw your consent for your child to participate in the research project at any time, without giving a reason, even after signing the consent form. Participant data can be withdrawn through contacting the researcher, contact details for the researcher can be found at the end of this document.

Due to the nature of the group interviews it may not be possible to identify any child's individual contribution to the audio recordings, therefore, it will not be possible to withdraw the data after the recordings have been made. However, all data will be anonymised once the researcher commences the transcription process.

5. What are the possible benefits of taking part?

The results of this study may not benefit you directly. However, we hope that the information we get from this study will help us to better understand if yoga has the potential to enhance the social and emotional wellbeing of future Primary School children in Northern Ireland.

6. What are the possible risks of taking part?

This study is considered low risk, though in light of the current Covid 19 pandemic, current Government and school Covid-19 recommendations will be adhered to in order to decrease risk of transmission.

Additionally, to help avoid any undue stress to the children, small group interviews will be used as they are viewed as one of the most child friendly approaches in children’s research. Furthermore, the children will be placed in Friendship groups, as this tends to allow the children to be more relaxed and comfortable in their conversation with their classmates. The researcher has many years’ experience of working with children and has completed his Child Protection training.

7. Will my taking part in this research project be kept confidential?

All information collected from (or about) you, your child and any other participants during the research project will be kept confidential and any personal information provided will be managed in accordance with data protection legislation. Please see ‘What will happen to my Personal Data?’ (below) for further information.

8. What will happen to my Personal Data?

All personal data will be anonymised. A Unique Reference Number (URN) will be used for each school and participant e.g., 1PA will refer to Parent A from school 1.

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further information about Data Protection may be found at <https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>. Participants will be provided with an

[electronic and hard copy of this document and all other relevant documents at least a week prior to an information session.](#)

All interviews will be recorded though all responses imparted during the interview will remain completely confidential and neither the school, nor any individual participant will be named and/or be identifiable in the final transcript of the thesis. However, if information of an illegal nature is disclosed then it will be passed on to the relevant authority. After transcription, the researcher will anonymise all the personal data it has collected from, or about, you in connection with this research project, with the exception of your consent form. Your consent form and anonymised data will be retained for a minimum of 1-year after final submission of the thesis.

You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the consent form. There will be no adverse consequences for anyone choosing to withdraw from the research. Information that has already been obtained may be kept by Cardiff University. Such information will be held in accordance with all applicable data protection legislation and in strict confidence, unless disclosure is required by the law or professional obligation.

9. What happens to the data at the end of the research project?

Findings will be used for the purpose of informing the write up of my doctoral thesis and may also be used to inform academic papers and/or for presentation at academic conferences.

10. What will happen to the results of the research project?

Results of the research will be published in my final thesis towards the end of 2023 and a copy of this can be obtained through contacting the researcher by email. It is not the intention of the researcher to publish the results in academic journals. However, it is likely the results will be used to inform academic papers and/or for presentation at academic conferences. Verbatim quotes from participants will be used in the final published transcript, however, all personal data will be anonymised.

11. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact me

directly at: p.rutherford@stran.ac.uk. If you feel your complaint has not been handled satisfactorily or you do not want to contact me directly you may contact a member of my supervision team; Dr Jemma Hawkins, HawkinsJ10@cardiff.ac.uk or, Professor Graham Moore, MooreG@cardiff.ac.uk. If you wish to contact someone independent from the research team, you can contact the School of Social Sciences Research Ethics Committee at Cardiff University), socsi-ethics@cardiff.ac.uk

12. Who is organising and funding this research project?

The research is organised by Mr Paul Rutherford and supervised by Dr Jemma Hawkins and Professor Graham Moore. The research is currently self-funded by Mr Paul Rutherford.

13. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the School of Social Sciences Research Ethics Committee, Cardiff University Ethics Committee.

14. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Paul Rutherford
Department of Health, Physical Activity and Sport,
Orchard Building
Stranmillis University College
Belfast, BT9 5DY
Tel: 028 90384382
Email: P.Rutherford@Stran.ac.uk

Thank you for considering to take part in this research project. If you decide to participate, you will be given a copy of this Participant Information Sheet and a signed consent form to keep for your records.

PARENTAL CONSENT FORM

Title of research project: Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

SREC reference and committee: SREC/48 School of Social Sciences Research Ethics Committee

Name of Chief/Principal Investigator: Paul Rutherford

**Please
initial box**

I confirm that I have read the information sheet (PIS Parental Version 3) dated June 2022 for the above research project.	
I confirm that I have understood the information sheet dated June 2022 for the above research project and that I have had the opportunity to ask questions and that these have been answered satisfactorily.	
I agree that my child will participate in an audio recorded small group interview that will last no longer than 45 minutes.	
I understand that my child’s participation is voluntary, and I am free to withdraw my child’s participation at any time without giving a reason and without any adverse consequences (e.g., to medical care or legal rights, if relevant). I am aware that my child’s data will be anonymised once the researcher commences the transcription process. I am aware that due to the nature of the group interviews it may not be possible to identify any child’s individual contribution to the audio recordings, therefore, it will not be possible to withdraw the data after the recordings have been made. I am	

aware that contact details for the researcher can be found on the Participant Information Sheet.	
I understand that data collected during the research project may be looked at by individuals from Cardiff University or from regulatory authorities, where it is relevant to my taking part in the research project. I give permission for these individuals to have access to my data.	
I understand who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.	
I consent to my child being audio recorded for the purposes of the research project and I understand how it will be used in the research.	
I understand that anonymised excerpts and/or verbatim quotes from my child's interview may be used as part of the research publication.	
I understand how the findings and results of the research project will be written up and published.	
I agree to my child taking part in this research project.	

Name of child (print)

Name of parent/guardian
(print)

Date

Signature

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP

Paul Rutherford
Stranmillis University College
Stranmillis Road
Belfast, BT9 5DY

Participant Information Sheet

Hi!

We would like you to take part in a research project. Before you decide, it's important that you understand what the research project is about and what you'll be asked to do. Take your time reading this and feel free to talk to your parent or guardian about it.

Thank you for reading this.

1. What is the project about?

We are studying how yoga can help children feel better and be happier in school. Yoga might be a way to help children feel calm and improve their emotional wellbeing. We want to learn:

- a) How schools in Northern Ireland are using yoga.
- b) How yoga might help children feel good both inside and outside of school.

2. Why have I been asked to take part?

Your school is interested in this project, and you have done yoga classes in your school before.

3. Do I have to take part?

No, it's totally up to you. If you don't want to join in, that's ok. Even if you say yes at first, you can change your mind later and stop anytime. No one will be upset if you decide not to do it.

4. What will I need to do?

If you want to take part, we'll ask you to join a small group of about 4-7 other children for a chat about yoga and how it makes you feel. The chat will last about 45 minutes. We'll only go ahead if both you and your parent/guardian agree.

5. What's good about taking part?

While you may not notice any changes right away, your answers might help us understand how yoga could help other children in the future.

6. What are the possible risks of taking part?

There's nothing dangerous about taking part in the project, but we'll make sure you always feel safe and comfortable. To help you feel relaxed, you'll be with friends from your class when we are talking.

7. Will anyone know what I said?

Everything you say will be private. We won't share your name, and no one will know what you said. However, if something serious, like someone being in danger is talked about, we would have to tell an adult to keep everyone safe.

8. Can I change my mind later?

Yes, you can. You or your parent/guardian can tell us anytime if you don't want to take part anymore. However, after the chat has been recorded, we may not be

able to remove what has been said because it is recorded in a group discussion. But don't worry, we won't use your real name, and your answers will be anonymous.

9. What will happen at the end of the project?

The answers we collect will help us write a report for my study. Your words might also be used in talks or papers, but your identity will stay private. Your name will be replaced by a number on any documents so you cannot be identified from them.

10. What if I have a question or a problem?

If you're worried about something, feel free to tell us. We will try to help with any problems you may have. If you get upset, we will make sure someone helps you. All of the people involved in the study have had special checks for working with children. If you, your parent/guardian have any questions, you can ask me, or my supervisors.

Contact information:

- Paul Rutherford: p.rutherford@stran.ac.uk .

Thank you for thinking of taking part in the project. If you decide to take part, you'll be given a copy of this Participant Information Sheet and a signed assent form to keep for your records.

CHILD PARTICIPANT CONSENT FORM

Title of research project: Exploring the potential for yoga to enhance the social and emotional wellbeing of Primary School children in Northern Ireland.

SREC reference and committee: SREC/48 School of Social Sciences Research Ethics Committee

Name of Chief/Principal Investigator: Paul Rutherford



**Please
initial box**

I confirm that I have read the P7 Participant Information Sheet (P7 PIS V2 June 2022) and that I understand the information about the study.	
I confirm that I have had the opportunity to ask questions, and that these have been answered satisfactorily.	
I agree to take part in the study and I am happy to be audio-recorded.	
I understand that I do not have to take part if I do not want to, and that I can change my mind about taking part at any point without saying why.	

(Please PRINT your full name)

(Date)