

The Impact of Seventh-day Adventist Beliefs, Values, and Practices relative to Physical Activity

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## Abstract

### **Aim**

This thesis comprises three interconnected studies aimed at investigating the impact of Seventh-day Adventist (Adventist) values, beliefs, and practices on physical activity (PA). The research addresses the underexplored area of how religious values and beliefs influence health practices, specifically PA, within the Adventist church in the United Kingdom (UK).

### **Context and problem**

The relationship between religion and health behaviors, particularly PA, is an underexplored area. The Adventist church promotes healthful living as a core principle, yet the influence of their religious values and beliefs on PA behaviors is not well understood. Understanding these dynamics can provide valuable information for developing effective health promotion strategies in religious contexts.

### **The aim and purpose**

The primary aim of this research was to investigate how Adventist beliefs, values and practices influence attitudes towards and participation in PA. The purpose was to identify potential barriers and facilitators to PA within the Adventist community and to inform the development of tailored health promotion initiatives.

### **Research Design**

A mixed-method approach was used in three studies:

Study 1: This qualitative phase involved semi-structured phenomenological interviews with Adventist church members in England and Wales. The objective was to explore how Adventist religious convictions shape attitudes toward incorporating PA as a health regimen.

Study 2: This quantitative phase utilised a questionnaire distributed to participants (n = 83) to examine the relationship between religiosity and PA. The aim was to determine if there was a correlation between religiosity scores and PA engagement.

Study 3: Focus groups were held with health leaders and pastors from the Adventist church to gather additional qualitative data. These discussions aimed to gain insight into the perspectives of church leaders on promoting PA within the Adventist church.

### **Findings**

The findings of these studies provide crucial information on the relationship between religion, PA, and health promotion within the Adventist church.

Study 1: Highlighted the positive impact that pastors' involvement in PA can have on church members' attitudes toward PA, and the need for pastoral buy-in to health promotion, as well as a collaborative effort from health leaders and pastor.

Study 2: No significant relationship was found between religiosity and PA engagement, suggesting that other factors may influence PA behaviours more strongly than religiosity.

Study 3: Revealed tensions and challenges within the Adventist community regarding PA promotion, with pastors and health leaders acknowledging difficulties in aligning religious beliefs with PA behaviours.

### **Conclusions**

Interviews and focus groups exposed a significant gap between pastors and health leaders, which hampers efforts to promote PA. Despite the lack of a direct link between religiosity and PA levels, the research underscores a notable disconnect between religious beliefs and PA behaviours. To address these challenges, the study recommends targeted leadership training and collaborations with health professionals to seamlessly integrate PA into the Adventist lifestyle. These efforts are crucial in developing effective health promotion strategies that overcome barriers to participation in PA within the Adventist church.

This research contributes to a better understanding of how faith-based values and beliefs impact health behaviours, providing a foundation for future health promotion initiatives in religious contexts.

## Dedication

I dedicate this thesis to the Adventist Church, a community whose values, principles and commitment to holistic well-being have been a source of inspiration and guidance throughout my academic journey. It is with deep appreciation for your mission and dedication to the betterment of individuals and communities that I offer this work in recognition of shared commitment to a brighter future. May the findings and insights within these pages contribute to the continued advancement of the ideals that we hold dear.

This dedication symbolises my sincere respect and admiration for the Adventist church and its enduring mission to promote well-being, both physically and spiritually, for people around the world.

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## Chapter 1 Introduction

The pursuit of knowledge is often an iterative and multifaceted journey, with each study contributing its unique perspective and insights to advance our understanding in a particular field. This thesis embarks on an exploration of a topic of significant contemporary relevance: the integration of PA within the context of religious practice, with a specific focus on the Adventist church in the United Kingdom (UK). The aim of this thesis is to clarify the complexed relationship between religious beliefs, health teachings, and the promotion of PA, offering a nuanced understanding of how these factors interact within the Adventist framework.

The incorporation of PA into religious settings holds profound implications for public health and individual well-being. The Adventist church, with its strong emphasis on health principles and holistic living, provides a unique lens through which to examine this relationship. As lifestyle-related diseases continue to pose a global health challenge (Hosoda, 2023; Mathur & Mascarenhas, 2019; Nakatani, 2023), understanding how religious beliefs influence the adoption of active lifestyles is crucial. By examining this context, this study contributes to the broader discourse on health promotion, religiosity, and the dynamic interplay between faith and physical well-being.

The first phase of the research involved conducting semi-structured interviews with members of the Adventist church. These interviews delved into personal experiences, beliefs and attitudes about PA in the context of their faith. Through

qualitative analysis, an exploration of the intricate relationship between religious beliefs and the adoption of active lifestyles among church members was carried out.

Building on the insights gained from the qualitative interviews, the second phase of the study employed a quantitative approach. The survey was designed and administered to a larger sample of members of Adventist churches. This survey aimed to quantitatively assess the relationship between religiosity and PA among Adventists in the UK, as well as the factors influencing participation in PA. An analysis of the survey responses yielded more statistically grounded perspective on the role of religious beliefs in shaping behaviour related to PA.

The third study conducted focus groups with pastors and health leaders to gain a deep understanding of their perspectives on health promotion, especially the integration of PA, and to explore key factors influencing its effectiveness. Pastors and health leaders wield significant influence in shaping members behaviors. A thorough exploration of their perspectives and motivations is pivotal for gaining a nuanced understanding of the communication and adoption processes of health promotion strategies within the Adventist church. This study also investigated theological perspectives and resource availability, which affect the effectiveness of health promotion efforts. Integrating leadership perspectives from this study with previous phases offers an inclusive understanding of the intricate relationship between religious beliefs and PA within the Adventist church, contributing to the overarching aim of this research.

By sequentially conducting semi-structured interviews, a quantitative survey, and focus groups, the research takes an inclusive approach to comprehensively understand how religious beliefs within the Adventist church influence the motivation to engage in PA. Qualitative interviews, a quantitative survey, and nuanced focus group insights collectively contribute to achieving the overarching aim of this study. These three studies provide a panoramic and in-depth exploration of the dynamic relationship between faith and physical well-being within the Adventist church, offering valuable insights that extend beyond this context to inform the broader discourse on health promotion and religiosity.

## 1.1 Background

According to Public Health England, 1 in 6 deaths in the UK is associated with physical inactivity, costing more than £7 billion annually, including £0.9 billion for the National Health Service (NHS) alone (Public Health England, 2022). Furthermore, the World Health Organisation (WHO) said that noncommunicable diseases (e.g., type-2 diabetes, heart disease, and some cancers) could be reduced by 80% and that five million deaths could be prevented if people were sufficiently active (WHO, 2021). Of significant relevance to the current time, being sedentary increases the risk for a severe Covid19 prognosis (Sallis et al., 2021).

Religion can play a significant role in shaping individuals' engagement in PA, as it intersects with diverse religious beliefs, practises, and sociocultural norms, ultimately

shaping attitudes and behaviours toward PA participation (Young-Eun et al., 2022). Religion is also known to have links to health promotion through its beliefs (e.g., viewing the body as a temple) and practises (e.g., health-related prescriptions) (Kawachi, 2020; Modell & Kardia, 2020). Approximately 68% of systematic studies that were reviewed by Noh et al (2022) reported a statistically significant positive relationship between religious faith and PA, while approximately 16% of the studies found a negative relationship (Noh et al., 2022). The findings suggest that participating in religious practices and activities is associated with a higher probability of participating in PA.

PA is defined as any bodily movement produced by skeletal muscles that results in energy expenditure, aimed at preserving or enhancing physical fitness, providing a protective effect against many diseases such as cardiovascular diseases and other major noncommunicable diseases and premature mortality (Ballin & Nordström, 2021). According to Witkowski et al. (2023) PA is expressly defined as any movement of the body that involves the contraction of skeletal muscles and results in the expenditure of energy. This encompasses a wide range of activities that are part of daily life, including occupational tasks, household chores, ambulation, and recreational pursuits. Exercise, on the other hand, represents a specific subset of PA characterized by its planned, structured, and repetitive nature (Witkowski et al., 2023). It is carried out with the ultimate or immediate objective of improving or maintaining physical fitness. Unlike general PA, exercise is deliberately organised and follows a systematic regimen, often incorporating specific exercises, durations, and intensities tailored to individual goals

(Koseki et al., 2023). Therefore, PA encompasses the entire spectrum of bodily movements that require energy expenditure, while exercise represents a distinct category within PA, distinguished by its intentional and structured nature, and with the primary objective of improving or preserving physical fitness.

The involvement of religious organisations in promoting PA is a topic of growing interest in public health research (Berkley-Patton et al., 2020; Dunn et al., 2021; Majee et al., 2022; Tristão Parra et al., 2018; Wilcox et al., 2022). Among religious groups, the Adventist denomination has received particular attention due to its emphasis on health and wellness (Banta et al., 2018; Limo et al., 2021). However, existing studies have suggested a limited association between religiosity and PA participation among Adventists (Leibow et al., 2021; Saintila et al., 2022; Svensson et al., 2020), raising questions about the effectiveness of Adventist theology about health in influencing PA habits of its members.

Ever since the 1950s, Adventists have been among the most highly studied populations in the world. As a result of studies continuing each year, many scientific articles have been published from research examining the Adventist lifestyle (Fraser, 1999; Gashugi et al., 2023; Limo et al., 2021; Majda et al., 2021). The primary cause of such intense interest in the study of Adventists is the finding that Adventist lifestyle is associated with a longer life expectancy of up to 6-10 years compared to the national average and significantly reduces death rates from all causes, including the two leading causes of death, coronary heart disease and cancer (Galvez et al., 2021; Sherchan et al.,



2020). Therefore, my research aims to explore the role Adventist beliefs play in the adherence to PA among its congregants, particularly as a denomination that promotes healthy lifestyle habits such as PA as part of its holistic teachings on health. As such, this study will investigate the Adventist denomination, which has a unique approach to health as part of its mission, ministry, and teaching, showing some parallels with its fundamental beliefs and religious tenets.

A historical reflection is however needed to understand the nature and development of the Adventist church. Understanding the historical development of the Adventist church is crucial to grasp its connection to PA. First, it reveals the doctrinal origins that underpin Adventist beliefs, which significantly impact their approach to PA. Second, this historical context helps to elucidate the cultural and social factors that have shaped Adventist practices, highlighting health and PA within their unique doctrines and historical evolution. Furthermore, tracing the historical progression of health guidelines within the church provides insight into why PA is a fundamental component of the Adventist lifestyle. Moreover, it aids in comprehending how historical teachings continue to influence modern Adventist practices, particularly in relation to PA. Lastly, placing this study in a historical context, an interdisciplinary approach can be applied, seamlessly integrating insights from theology, sociology, anthropology, and health sciences to provide a more comprehensive understanding of the topic.

By the year 1919, the Adventist church had undergone two pivotal identity crises that significantly impacted its theological and doctrinal trajectory. The initial crisis,

famously recognised as the "Great Disappointment" of October 1844, precipitated a fundamental inquiry into the intrinsic characteristics of Adventism. This critical juncture prompted an introspective analysis that sought to elucidate the distinctive theological tenets that defined Adventism from other contemporary religious frameworks. The subsequent identity crisis faced by the organisation, culminating during the 1888 convocations in Minneapolis, engendered an intricate discourse pertaining to the amalgamation of Christian principles within the Adventist paradigm (Knight, 2000).

During these crucial historical defining moments for the Adventist church, healthy lifestyle behaviour had seemingly taken a back seat, although Ellen G White (EGW) had outlined in 1863 the clearest direction regarding health reform among Adventism. In fact, EGW had 5 visions on health and had outlined those parameters on which the Adventist church rests. EGW, a prominent figure within the Adventist church, exerted a profound influence on the formulation and dissemination of health reform principles that have become integral to the fabric of Adventist ideology. Spanning the years from 1848 to 1871, her series of visionary experiences served as a catalyst for the development of an exhaustive paradigm for wholesome living, one that harmonised physical well-being with spiritual precepts.

The genesis of Adventist Health reform is discerned in EGW's initial visionary episode in 1848. This revelatory encounter underscored the imperative of abstaining from tobacco and tea, a mandate justified on the grounds of health. This seminal vision laid the rudimentary groundwork for the subsequent exploration of the interplay

between individual lifestyle choices and their implications for holistic health (Douglass, 2000).

Building upon the foundation set in 1848, EGW's vision of 1854 expanded the contours of Adventist health reform. This subsequent revelation emphasised not only personal habits but also the pivotal role of environmental cleanliness and the adoption of a frugal dietary regimen. By accentuating the importance of a salubrious environment and a simple diet, this vision concretised the varied dimensions of healthy living (Galvez, 2016).

The zenith of EGW's contribution to Adventist health reform arrived in 1863 with a vision. The profundity of this visionary experience lies in its meticulous delineation of an intricate tapestry of healthy behaviours that encompass the physical, mental, and spiritual spheres. It served as a seminal document that codified the fundamental principles of the Adventist health reform ethos (Douglass, 2000).

The guidance of EGW in 1865 further underscored the symbiotic relationship between health reform and the gospel message. The integration of healthy living with the religio-spiritual path of Adventism was posited as a harmonious union, suggesting that an individual's physical well-being was inextricably linked to their religious journey. A subsequent visionary encounter in 1871 reiterated the fundamental purpose of the Adventist Health institution. This reaffirmation of mission served to highlight the enduring commitment to health reform within the larger context of Adventist

theological convictions, thus amplifying the theological significance of attending to one's well-being (Galvez, 2017; Knight, 2000).

Therefore, the chronicle of EGW's visionary experiences from 1848 to 1871 charts an evolutionary trajectory that illuminates the unfolding of Adventist health reform principles. These episodes, marked by their progressive depth and scope, substantively contributed to the conceptual edifice of holistic living, encompassing physical health, environmental stewardship, and the congruence of bodily well-being with religious principles. Consequently, EGW's visionary legacy continues to bestow on Adventist health reform a scholarly and spiritually grounded foundation that remains resonant and influential.

### Definition of Adventism

Adventism is a Protestant Christian tradition that emerged in the early nineteenth century, characterised by its distinctive emphasis on the imminent return of Jesus Christ and the literal interpretation of apocalyptic prophecies (Činčala et al., 2021; McBride et al., 2021a; Moskala, 2020). This tradition, which began during the Second Great Awakening in the United States, is based on the belief in the Second Coming of Christ as a central tenet of faith. As described by Lazic, (2023), a prominent branch of this tradition, maintains the observance of the Sabbath on the seventh day (Saturday) and integrates a comprehensive approach to health and well-being into its doctrines

(Lazić, 2023). This holistic perspective reflects the belief that spiritual and physical health are interconnected and essential to prepare for Christ's return.

The Adventist lifestyle is characterised by specific health practices that align with its theological principles. These include a vegetarian diet, the avoidance of alcohol and tobacco, and the promotion of regular PA. This health conscious approach is not only a set of dietary and lifestyle choices, but a reflection of the Adventist commitment to living a life that honours God and prepares for the anticipated Second Coming (Lazić, 2023). Further elaboration in *The Oxford Handbook of Adventism* (2024) reveals how these practices are deeply embedded in Adventist beliefs, influencing daily life and community health initiatives (Campbell et al., 2024).

Adventist theology supports a broad view of human nature, portraying individuals as unified, yet multifaceted entities with interconnected physical, mental, emotional, and spiritual dimensions (Osei, 2023; Seventh-day Adventist World Church, 2024). This holistic perspective is deeply ingrained in the belief that humans are created in the image of God, embodying a harmonious integration of these diverse aspects. Adventist theological anthropology serves as the foundation for their health-related practices, including the advocacy for PA, as a means of honouring the body as a temple of the Holy Spirit (1 Corinthians 6:19) and promoting overall well-being. This interconnected understanding shows the intrinsic relationship between spirituality and physical health within the Adventist faith (Blanco, 2015; Platovnjak & Zovko, 2023).

Furthermore, the Adventist emphasis on holistic human nature is reflected in their approach to healthcare, where the integration of physical, mental, and spiritual well-being is central to their health philosophy (McBride et al., 2021a; McKenzie et al., 2015a; Seventh-day Adventist World Church, 2024). This integrated approach recognises the importance of addressing the whole person in healthcare care practices, recognising the interconnectedness of various aspects of human existence. By acknowledging the interplay between physical health, mental well-being, and spiritual fulfilment, Adventists strive to promote a comprehensive approach to health that aligns with their theological understanding of human nature.

Clarifying the interrelationship between religiosity and spirituality is essential for a comprehensive understanding of these concepts, particularly within the context of the Adventist Church and its health reform initiatives. While often used interchangeably, religiosity and spirituality represent distinct yet interconnected dimensions of human experience.

Religiosity typically refers to organised practices, beliefs, and rituals associated with a specific religious tradition. It encompasses the adherence to doctrines, participation in communal worship, and participation in religious activities that are formally structured within a faith community (Höllinger & Makula, 2021). In the context of the Adventist Church, religiosity manifests itself through observance of the Sabbath, participation in church services, and adherence to the church's health principles as

outlined in official documents such as the Adventist Church Manual (Seventh day Adventist church, 2023).

On the contrary, spirituality is a broader and more individualised concept that pertains to the personal quest for meaning, purpose, and connection to the transcendent. It often emphasises personal experiences of the divine, inner peace, and the pursuit of personal growth and well-being (Jastrzębski, 2022; Lalani, 2020; Lucchetti et al., 2021). Spirituality can exist independently of organised religion, although it frequently intersects with religious beliefs and practices. Within the Adventist framework, spirituality is reflected in the emphasis on holistic health, the integration of faith and lifestyle choices, and the pursuit of a personal relationship with God (Galvez, 2017).

The interrelationship between religiosity and spirituality can be understood as a dynamic interplay where each influences and enriches the other. For example, structured religiosity practices can provide a foundation for spiritual growth, offering communal support and shared beliefs that enhance individual spiritual experiences (Koenig, 2020; Obregon et al., 2022). Conversely, personal spirituality can invigorate religious practices, motivating individuals to engage more deeply with their faith community and its teachings (Ongaro & Tantardini, 2023; Tarpeh & Hustedde, 2021).

## EGW and her contribution to Adventism

EGW was born in 1827 and lived for 87 years. Her extensive travels encompassed three continents, relying on ships and trains, as she zealously advanced the causes of health advocacy, Biblical education, and Gospel propagation, playing a pivotal role in the consolidation of the Adventist church's establishment. Throughout her lifetime, EGW crafted an extensive body of work, which comprised over 5,000 periodical articles and 40 books. Presently, her literary legacy has expanded further, encompassing a repository of more than 100 titles in English, including compilations sourced from her comprehensive 50,000 pages of manuscript (Galvez, 2017).

EGW's substantial literary output is particularly notable for its extensive coverage of health-related topics, exceeding 2,000 pages. This prolific contribution to the discourse on health during her era shows her significant impact on the subject matter. Additionally, her status as the most translated American author, regardless of gender, reflects the global reach and resonance of her writings (Galvez, 2017; Shipton, 2016; White Estate, 2023).

EGW played a crucial role in organising the Adventist health message and adapting its principles to today's world. Such organising involved clarifying what the health message is about, why it matters, what it includes, and how to promote it. EGW application of these principles to modern times included looking at current habits and



ways of living through the lens of biblical teachings (Douglass, 2000; White, 1894b; White Estate, 2023).

Starting as early as 1863, EGW, a co-founder of the Adventist church, stressed the importance of healthy living. Her initial message focused on the connection between physical well-being, spiritual health, and highlighting holiness. In 1866, the Adventist church established what was known as the Western Health Reform Institute in Battle Creek, Michigan. Notably, Dr. John Harvey Kellogg, a pioneer of the Adventist movement, along with his brother William, played a role in developing modern innovations like corn flakes and improving peanut butter production (AdventistWorld Church, n.d.).

EGW's influence extended throughout her life, shaping the church's health philosophy and priorities. EGW's adaptability and forward-thinking approach to health advocacy are exemplified by her resolute stance against smoking, even when it lacked biblical mention. She voiced her opposition to smoking during a period of rising popularity, particularly during the tobacco industry's boom in the United States between 1870 and 1880. In addition, she astutely recognised the sedentary lifestyles emerging in cities due to technological advancements and championed the importance of PA to counter this trend (White, 1897b, 1964).

However, the integration of spirituality with various aspects of human life within the Adventist Church has a rich theological foundation that predates EGW's

contributions to health reform. Although EGW played an important role in advancing health-related practices within the denomination, it is essential to acknowledge the theological beliefs and perspectives that laid the foundation for this holistic approach to well-being. Figures such as Joseph Bates and James White were instrumental in shaping Adventist theological principles that emphasised the interconnectedness of the physical, mental, emotional, and spiritual dimensions of human nature (Baker, 2022; Campbell et al., 2024). Their writings and teachings underscored the holistic view of human beings as central to Adventist theology, setting the stage for the integration of spirituality with health practices (Lewis, 2022).

Before the emergence of concrete medical evidence, she fervently promoted practices that are now considered essential for health. She openly discouraged smoking, alcohol consumption, and the use of harmful drugs such as arsenical drugs and mercury-based drugs. Her advocacy expanded to dissuading the consumption of tea, coffee, and other stimulants, culminating in her endorsement of a lacto-ova vegetarian diet as the ideal choice. Furthermore, she emphasised the importance of clean water, both internally and externally, along with fresh air, adequate PA and rest, faith, proper exposure to sunlight, integrity and social support. These enduring principles continue to underpin the health education and practices within the Adventist church. (General Conference of AdventistWorld Church, 2023a).

The health teachings and initiatives of the Adventist church are rooted in a combination of biblical teachings, EGW's guidance, and evidence-based scientific health

principles. Her early insights and emphasis on holistic well-being have enduringly influenced the health-related beliefs and practices of the Adventist church. However the Adventist Health message is specific to the Adventist tradition, and different cultures and religions might interpret health principles in various ways. This panoramic look at the Adventist Health message origins, principles, and EGW's contributions provides valuable insights into how biblical teachings intersect with health concerns in today's world.

The Adventist church has also established many hospitals, schools, and other healthcare facilities throughout the world, primarily, however, in the United States of America (USA). Such an invested interest in the health of the mind, body, and soul led not only to the establishment of hospitals (previously known as sanatoriums) but also to many epidemiological research investigations into the correlations between religion and health. The Adventist community in Loma Linda, California, has since been inducted into the 'Blue Zone' category, where people of a certain religio-cultural and geodemographical disposition live up to ten years longer than the average population.

## 1.2 Unveiling the Adventist Lifestyle: How Healthy Habits Impact Disease Risk Factors

During the past 5-6 decades, Adventists have been involved in designated health-funded studies where investigations carried out would provide evidence of how the impact of healthy lifestyle patterns positively affects risk factors for various diseases. In addition, and of particular interest, is the unique teaching and health promotion that

Adventists are known to advocate. Research findings since the 1950s have shown that Adventists are among a percentage of the population that enjoys low rates of chronic diseases leading to lower mortality rate although residing in demographically chronic disease hot spots (Willett, 1999). The surge of interest to investigate the lifestyle of the Adventist, as a result, is indeed warranted. Harnessing healthy behavioural habits has shown to be linked strongly with an individual's religiosity/spirituality and is widely accepted as one of the determinants of health (Cohen & Koenig, 2003; Idler et al., 2023; Ogbodo & Onyekwum, 2023; Park, 2007).

Several faith-based health interventions have attracted the interest of researchers and participants alike, most of whom have focused on the dietary and other aspects of healthy behaviour. Adventist Health teachings have been extensively researched for some decades, predominantly in the USA, with emphasis within the California area (Banta et al., 2018). The Adventist church has played an impactful role in the epidemiology of chronic diseases with investigations using dietary and socioreligious factors connected with church involvement that was found to decrease the risk of developing chronic diseases (Morton et al., 2017; Pramil, David, Gary et al., 2008; Singh et al., 2001). Although the factors that contribute to good health are advocated in the teachings of the Adventist church, the main emphasis on health in the Adventist religion is on the diet.

### 1.3 Statement of the Problem

The Adventist church has played a significant role in prospective epidemiological studies which assessed for the mortality rate among Adventists in certain demographic areas compared to their counterparts. However, researchers have not evaluated the intersection between Adventist beliefs and PA.

PA plays an essential role in general health and can reduce morbidity and subsequent mortality related to the leading causes of non-communicable chronic diseases such as cardiovascular disease, cancer, and diabetes, or death (WHO, 2017). In addition, PA can slow the effects of aging and cognitive deterioration, thereby extending quality of life among adults (Palozzi & Antonucci, 2022). It is therefore important to

discuss and measure the impact of Adventists' beliefs relative to PA, not least because the Adventist church identifies itself, through its doctrines and health teachings that the upkeep of healthy physical habits is a moral and religious duty.

Furthermore, researchers have focused their attention on faith-based PA interventions to assess desired outcome which is often classified as increased steps among congregants or better awareness of the benefits of PA (Dunn et al., 2021; Schwingel & Gálvez, 2016; Webb & Bopp, 2017). However, understanding how religious people, particularly Adventists, who have an overt health teaching, integrate their religion and beliefs into PA is understudied. Moreover, no research has been done in this area among Adventists in the British Union Conference (BUC) of Adventists (England, Wales, Scotland, and Ireland), therefore not much is understood about Adventists in the UK as it relates to PA. The BUC is the headquarters and administrative body of the Adventist Church in the UK, overseeing the church's activities and ministries in the UK.

Compared to regions like the United States, where Adventist research has been more extensive, the BUC offers a distinct cultural, environmental, and healthcare system context. Exploring the perspectives and behaviors of Adventists in this region provides a scholarly opportunity to gain deeper insights into the interplay between religious beliefs and health behaviors within a unique cultural and societal setting.

Therefore, understanding the PA patterns among Adventists in the BUC is crucial for developing region-specific strategies to promote health and well-being. Factors such

as sociocultural norms, access to resources, public health policies, and lifestyle patterns can vary between the UK and other regions, thereby influencing the health behaviours of Adventists in this specific context. By conducting research in this area, valuable information can be gained, enabling the identification of challenges and opportunities for tailored interventions aimed at improving health promotion initiatives within the Adventist church in the UK. Additionally, the findings may have broader implications for similar faith-based communities in the region, contributing to the advancement of scholarly knowledge and evidence-based practices in the field of health promotion.

Research, such as the study by (Morton et al., 2017), has shown that actively identifying as a member of the Adventist denomination is associated with adopting the lifestyle advocated by the church. This lifestyle, rooted in religious teachings and beliefs, has been found to have a positive impact on longevity, likely due to the adherence to healthy behaviours, including regular PA. As an example, the Adventist Health Study (AHS-2) is a notable research endeavour that extensively explores the lifestyle habits of Adventists (Butler et al., 2008; Montgomery et al., 2007). Therefore, the Adventist church, which prioritises health within its religious and doctrinal principles, serves as an ideal population to investigate and assess the relationship between religiosity and PA levels.

Aim:

The overarching research aim is to investigate the influence of Adventist beliefs, values, and practices on PA in the UK.

Objectives:

1. Evaluate the Effectiveness of Health Promotion Initiatives: Systematically assess the impact and efficacy of existing health promotion initiatives implemented within the Adventist church, gauging their influence on the PA levels of congregants.
2. Examine the Relationship Between Religiosity and PA: Investigate the nuanced relationship between levels of religiosity among Adventist members and their engagement in PA. This involves discerning whether religiosity acts as a motivator or potential barrier to active lifestyles within this religious community.
3. Provide Recommendations for Improved Health Promotion Strategies: Based on the findings, formulate evidence-based recommendations for enhancing health promotion strategies within the Adventist church, considering the perspectives of pastors, health leaders, and congregants. This may involve tailoring initiatives to align with religious beliefs and practices to maximise effectiveness in promoting healthier lifestyles.



#### 1.4 Role of the Adventist Pastor in the Adventist Church

The responsibilities of an Adventist pastor are wide-ranging and comprehensive, with a primary focus on cultivating the spiritual and communal well-being of the church. Grounded in a steadfast commitment to addressing the dynamic and evolving needs of the church community, the pastor's role encompasses diverse domains. These include pastoral care and nurture, evangelism, and church growth, as well as preaching and worship, church management, and financial management. (Trans-European Division Adventist, 2023).

In his discussions about the role of pastors within the Adventist church, Wagnersmith (2021) emphasised a variety of works and responsibilities. These include the central role of preaching sermons and leading worship services, conducting bible studies, providing spiritual guidance, offering counselling, emotional support, further guidance to community members, fostering community engagement, involvement in social issues, and the administrative responsibilities of managing church operations and overseeing various aspects of congregational life (Wagnersmith, 2021). Likewise, Cincala et al (2021) emphasises the demanding nature of pastors' responsibilities, impressing the need for self-care and support systems within the church community, and highlights the unique challenges faced by pastors in their role as spiritual leaders, all of which are crucial for creating a healthier ministry environment (Cincala & Drumm, 2021).

Evangelism and church growth constitute a crucial facet of the pastor's role, characterised by an ongoing commitment to outreach. The pastor undertakes the responsibility of conducting bible classes and equipping church members to impart bible studies, thereby facilitating the dissemination of spiritual knowledge. Moreover, a strategic objective of baptising a specific proportion of the church membership annually, coupled with the pursuit of consistent net growth in membership, reflects the pastor's dedication to expanding the congregation's reach. The assimilation of new members into the church family further illuminates the pastor's role in perpetuating a vibrant and inclusive church community (Huapaya, 2020; Trans-European Division Adventist, 2023).

Central to the pastor's responsibilities is the domain of preaching and worship (Šeba, 2022). A meticulously planned sermonic year is demonstrated by the pastor's commitment to structured and meaningful spiritual engagement, supported by the facilitation of quarterly communion services. Communion services reflects on the humility of Jesus and His death burial and resurrection, through the breaking and eating of bread and drinking of wine, which is a symbol of his blood (Mogoane et al., 2023). This engagement is informed by a keen understanding of the congregation's needs, aligning faith and worship to address these requirements (Kidder, 2009; Wagensmith, 2021).

An in-depth analysis of the official Adventist Church Manual and the Ministerial Handbook is crucial for comprehensively understanding the roles and competencies required of pastors within the Adventist Church. These documents serve as foundational

texts that articulate operational guidelines, theological principles, and ministerial responsibilities that govern church leadership and pastoral care (General Conference of Seventh-day Adventist World Church, 2024).

The Adventist Church Manual provides a detailed overview of the church's organisational structure, governance, and the expectations placed upon its leaders. It delineates the multifaceted roles of pastors, including their responsibilities in preaching, teaching, and administering the sacraments, as well as their participation in church administration and community outreach. Importantly, the manual emphasises the necessity of spiritual leadership, highlighting the imperative for pastors to model Christ-like behavior and to cultivate a nurturing environment conducive to congregational growth (General Conference of Seventh-day Adventist World Church, 2024).

In parallel, the Ministerial Handbook offers comprehensive guidance on the competencies essential for effective pastoral ministry. This document addresses various dimensions of pastoral work, including counselling, evangelism, and church planting, while also elucidating the theological education and training required for pastoral effectiveness. The Ministerial Handbook serves as a practical resource for pastors, equipping them with the tools and knowledge necessary to carry out their roles effectively and engage meaningfully with their congregations and the broader community (General Conference of Seventh-day Adventist World Church, 2024).

Church management represents a core administrative facet of the pastor's role, characterised by prudent decision-making and effective leadership. The pastor is

instrumental in convening regular church board meetings and business meetings, ensuring a collaborative and well-structured approach to governance. Collaboration with the elders committee exemplifies the pastor's dedication to strategic planning and preservation of value (Sr, 2021). The cultivation of leadership capabilities within the congregation, alongside the formulation of short-term, medium-term, and long-term plans for the church, further shows the pastor's commitment to sustainable growth (Adventist UK, 2023).

### 1.5 Role of the Health Leader in the Adventist Church

The pivotal role of the health leader encompasses the essential task of cultivating health awareness (Park, 2024) and imparting temperance principles to established congregants and newcomers (McBride et al., 2021b). The efficacy of this ministry is contingent on a judicious allocation of resources, involving both personnel and financial provisions. To this end, prudent solicitation of budgetary support from the church board early in the fiscal cycle is often recommended. Securing endorsement from pastoral leadership for proposed undertakings is paramount for effective implementation of planned interventions such as health promotion (Seventh-day Adventist church, 2017).

A fundamental facet of the influence of the health leader involves equipping newly inducted members with fundamental health insights. Furnish each person with the informational brochure "Good Health in One Package," available through The Health Connection catalogue, which facilitates dissemination of the eight-fold foundational

health and temperance precepts advocated by the Adventist church. Health leaders are expected to encourage member participation in local church outreach initiatives and seminars pertaining to health ministry (Kołodziejska, 2022), which augments their substantive involvement and contribution to the broader social milieu. The empowerment of members by health leaders through active participation in instructional workshops, convocations, and other pertinent events is crucial to creating awareness of health principles and their pragmatic application (Seventh-day Adventist, 2023).

The health leader in the Adventist church holds a crucial position, as they have a major role in shaping the church's health-related policies and financial decisions. They represent health ministry concerns within church board meetings, which greatly influence policy making and budget allocations. Their collaboration with other church leaders is vital in creating a well-rounded programme that ensures that all aspects of church activities are integrated and holistic in nature.

The orchestration of impactful programmes constitutes a central tenet of the health leader's mandate (Wilson, 2023). Facilitating health screenings, seminars, and workshops, covering topics that include smoking cessation, nutritional education, stress management, physical well-being, and their biblical foundations, affirms the church's commitment to communal well-being (Seventh-day Adventist church, 2017). The active pursuit of initiatives to address prevalent health concerns has earned Adventist

communities recognition and praise, frequently leading to requests from corporate and civic organisations to collaborate (Health ministries, 2023).

Finally, the health leader is entrusted with the onus of cultivating health literacy among newly embraced church members. In this capacity, fostering a continuum of education through workshops, seminars, and interactive platforms assures a robust foundational bedrock for health-conscious living. The health leader plays a crucial role in spreading awareness about health and creating a church environment that values and embodies general well-being.

This chapter serves as the inaugural phase of an in-depth investigation into the complex interrelation between religious beliefs and PA within the Adventist church in the UK. The primary objective is to discern how Adventist teachings and health principles influence individuals' motivations for engaging in PA, contributing insights with broader ramifications for public health and individual well-being. The distinctive emphasis of the Adventist church on health principles adds a unique layer to this exploration. As we embark on this scholarly journey, it becomes apparent that the interplay between religious beliefs and PA constitutes a nuanced and indispensable area of study. Subsequently, the literature review will meticulously contextualise and enhance this exploration by synthesising existing research and insights, laying a robust foundation for the ensuing chapters of this dissertation.

## Chapter 2 Literature review

### 2.1 Introduction to the Literature Review

The purpose of the review is to explore how religious beliefs and practices motivate or demotivate members of the Adventist church to participate in PA. The importance of this subject is that the Adventist church has a unique connection between its health message its theology, doctrine, and values (Banta et al., 2018; L. M. Kent et al., 2016). This has not been explored within England and Wales. However, before we analyse the relevant evidence, a definition of the key concepts and terms will be outlined.

Religion involves beliefs, practices, and rituals related to the sacred, whereas religiosity identifies the various dimensions of religious attitudes within a religious organisation (Kahan, 2002). Therefore, questions can be established to measure the level of religiosity or religious involvement of the individual (Koenig et al., 2011). A fundamental aspect of the Adventist religion and its health message is that the human body is the temple of the Holy Spirit, as such, moderation in what is good for the body, and abstinence from what is bad is an agreement that new members make prior to becoming a member of the church (McBride et al., 2021a).

The benefits of regular and increased PA have been substantially documented (Chan et al., 2004; Hafner et al., 2020; Kokkinos, 2012; Lewis & Hennekens, 2016).

However, there are continuing efforts to improve PA levels within England and Wales and certainly globally. This is further compounded by the Covid19 pandemic resulting in increased concerns regarding levels of physical inactivity among adults (Bu et al., 2021; Rogers et al., 2020) and public health compliance towards PA.

However, one of the things that is yet to be explored comprehensively at the level of policy is how religion or religious organisations could affect an increase in PA in England and Wales. This is further strengthened by evidence linking religiosity with positive lifestyle behaviour (Kim & Sobal, 2004).

## 2.2 Theoretical Framework

Studies have consistently showed that various dimensions of religiosity (ranging from but not limited to) religious affiliation, religious preference, church attendance, religious motivation, and orientation (intrinsic and extrinsic) to greater depth of religious commitment have a wide range of positive health outcomes (Arredondo et al., 2022; Koenig, 2012; McKenzie et al., 2015a; Villani et al., 2019). This is primarily due to their association with better health attitudes and behaviours, resulting in improved mortality rates among those who generally practice a particular religious or denominational directive.

it is widely accepted that religious beliefs influence ones' behavior (Krause et al., 2017; Upenieks & Liu, 2021), and behavior influences health therefore the link between



religion and health as it relates to PA among Adventists in England and Wales may warrant further examination. Not least because of the overt health teaching of the Adventist church since its inception in the 19th century. In other words, the Adventist denomination uniquely connects healthy lifestyle behaviours to its doctrinal teaching (Douglass, 2000; White, 1897a).

The relationship between religion and health has gained rapid interest over the years because of the strength of the correlation that was found between membership in a defined religious denomination and health . Habits are therefore formed and encouraged through supportive denominational mandates and directives. The theory then suggests that if religious beliefs have a positive effect on one's health behaviour, then Adventists are likely to engage in PA which is essential to health and longevity.

### 2.2.1 Review of the Research Literature and Methodological Literature

The purpose of the review is to explore how religious beliefs and practices motivate or demotivate church members to engage in PA. The importance of this subject is that the Adventist church has A unique connection between its health message its theology, doctrine, and values (Banta et al., 2018; L. M. Kent et al., 2016). This has not been explored within England and Wales.

### 2.2.2 Churches as a potential setting for PA promotion

Various settings are used for PA promotion, and churches have increasingly become attractive venues for health promotion such as PA interventions because of the

link between religiosity and PA. Moreover, religious organisations generally encourage healthy lifestyle behaviour among its members with an appreciation of the impact on the wider community (Arredondo et al., 2017; Bopp & Fallon, 2013; Drayton-Brooks & White, 2004; Gillum et al., 2008; Nordtvedt & Chapman, 2011; Wende et al., 2020).

Within the wider community there are more commonly known settings for PA promotions; however, the church as a setting in England and Wales is under-researched. Likewise, research into faith-based PA interventions reports significant association between religion and physical health (Koenig, 2012; Krause et al., 2017). This, in some way, addresses the continual health disparities that exist in society relative to gender and ethnic minority groups (Kumanyika et al., 2014; Whitt-Glover et al., 2008).

However, the relationship is very complicated and although there is evidence linking religiosity with positive lifestyle behaviours (Morton et al., 2017) and attitudes towards health (Bopp & Fallon, 2013; Fagan et al., 2010), the relationship is not clearly understood. In addition, the role of religiosity may vary in different religious organisations (Koenig et al., 2011; Waters et al., 2018).

Moreover, the literature provides measures that shows how different age cohorts within churches might engage in PA behaviour (Koenig et al., 2011; Roff et al., 2005), and how religious attendance influences PA behaviour when someone religious conforms or non-conforms to religious pro and prescriptions of health. Furthermore, most of the studies are done in the United States of America (USA). However, few of

them have considered how religious denominations or organisations can have different effects.

Several (longitudinal, mortality, epidemiological) studies have been conducted on one such religious organisation, the Adventist church, providing insights of the relationship between religion and health, its influence and impact on healthy lifestyle behaviours (Banta et al., 2018; Butler et al., 2008; L. M. Kent et al., 2016; Lee et al., 2008; Leibow et al., 2021; McKenzie et al., 2015b). Furthermore, studies have shown that approximately 90% of the global Adventist membership (over 21 million) recognises the church's health message as holistic, combining the mind, body and spirit (McBride et al., 2021a).

The Adventist Church is notable for its extensive network of health institutions, reflecting its commitment to holistic health and well-being. Globally, the church operates approximately 230 hospitals and sanatoriums, which provide a wide range of medical services with an emphasis on preventive care and health education (Adventist Health International, 2023; Landless, 2023).

In addition, it manages around 131 nursing homes, retirement centres, orphanages, and children's homes, catering to the needs of different age groups and underserved populations (Adventist Health International, 2023). The church's reach also extends through more than 2,034 clinics and dispensaries, offering essential healthcare services and contributing to public health initiatives worldwide (Adventist Health

International, 2023). This comprehensive network highlights the Adventist Church's significant role in promoting global health and well-being, illustrating its enduring commitment to health and healthcare as a core aspect of its mission.

### 2.2.3 Aim of the review

Therefore, the aim of this literature review is to explore the evidence that religious beliefs, and practices influence PA behaviour among church members and to gain insight into the practices and beliefs of Adventists in England and Wales relative to PA. The review identifies and fills a gap in research, provides theoretical knowledge, and outlines areas for future research.

#### 2.2.3.1 Search strategy.

A systematic search of the literature was conducted ensuring a robust review of available and appropriate studies. First, a search of peer reviewed journals, books, and grey literature on religion and PA was conducted using key terms (Table 1). Ten databases were used to conduct review searches that included APA PsycArticles, PsycInfo, CINAHL, Education Research Complete, MEDLINE, Scopus, PUBMED, SPORTDiscus, Mendeley, and Ethos. Each database was activated with a modified search strategy. Second, the reference list of the articles found was used to identify other relevant studies. The search terms are listed in Table 1.

The study designs of interest consisted of randomised controlled trials, observational studies (retrospective, prospective, before-after or comparative cohorts),

surveys, qualitative, quantitative research, or mixed methods studies. Due to increased interest in the relationship between religion and health over the years (Seybold & Hill, 2001) (Campbell et al., 2010) (George et al., 2000) (Koenig et al., 2012) and the lack of studies during the Covid-19 pandemic, studies from the year 2000 to the current were review. Search results retrieved were documented electronically, and studies derived from references contained in selected publications were included. References were recorded in Mendeley software.

The literature search using the search terms listed in the table below identified 3,793 articles. Following a screening of title, abstracts and relevancy using the inclusion criteria, 138 articles were selected. However, after full-text screening, 12 articles met the criteria for this review of the literature. See the PRISMA diagram below.

### 2.2.3.2 Literature review search terms

**Table 1. Search Terms**

SEARCH STRING 1	SEARCH STRING 2	SEARCH STRING 3
Religio*	Attitude	Exercis*
Spiritual*	Influence*	Physical Activity
Faith	Motiv*	Physical Fitness
Church	Self-Determination	
Adventist	Behavioural Regulation	

Adventism		
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**Table 2**

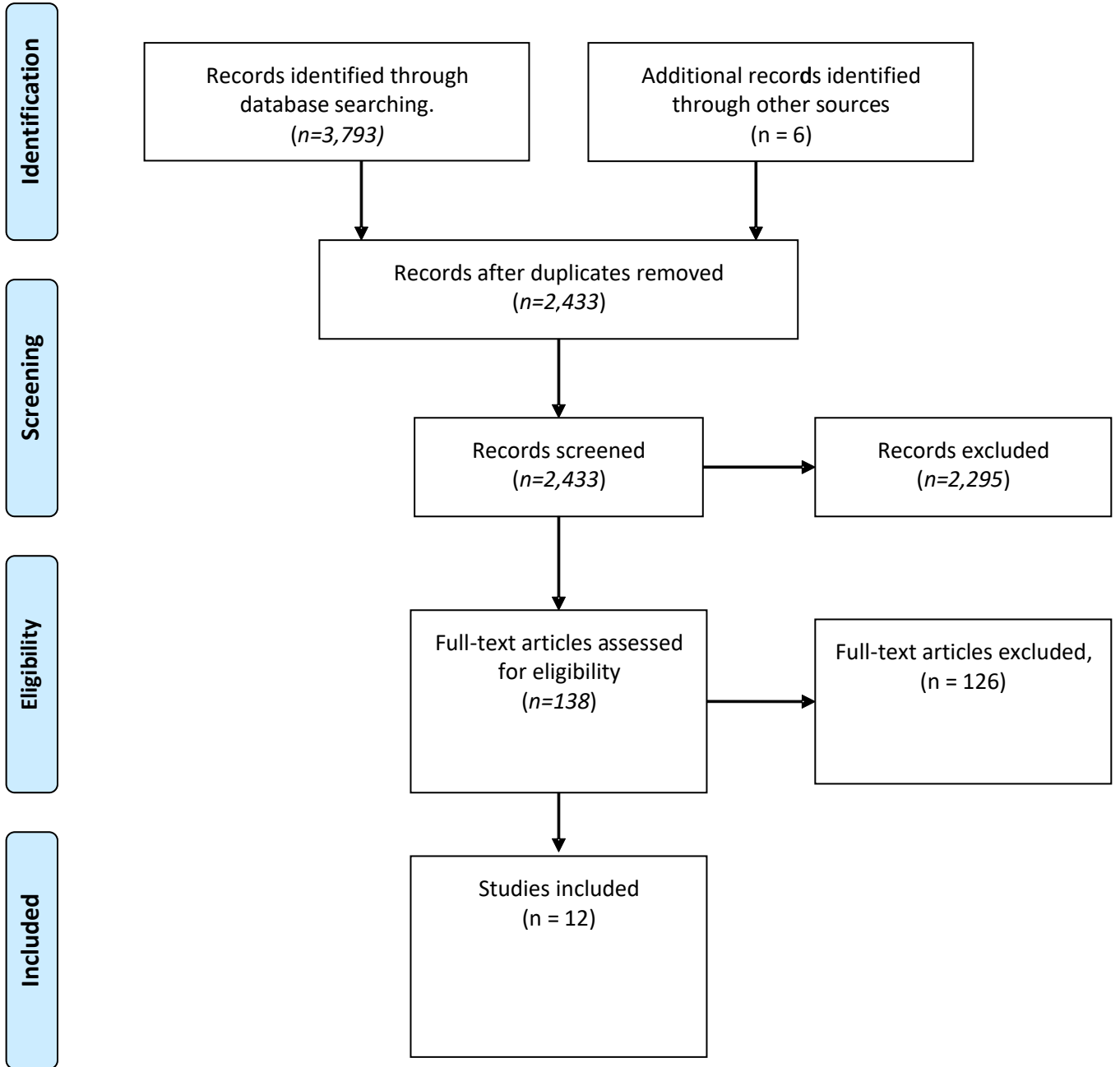
***Inclusion and exclusion criteria to be applied to potentially eligible citations identified by the literature search***

- *Written in English.*
- *Adventist and other religious organisations adults, age 18 years and older*
- *Articles, books, and grey literatures published between January 2000 to 2023*
- *Mixed methods, qualitative, quantitative studies delineating evidence of the relationship between religiosity and PA/exercise among religious adults not limited to ethnic minority population of or the Adventist denomination. Comparative studies randomized control trials (RCT), and experimental studies.*
- *Studies that reported methodologies to determine gaps in health research among SDAs.*
- *Studies that measure PA and religiosity synergistically, reporting outcomes that may give inference on physical and psychological health, measured by religio-spiritual or faith integration in healthy lifestyle behaviour.*
- *Studies that use the term “spiritual or spirituality” with emphasis on the term religious or religiosity*
- *Faith-based and faith-placed PA or exercise intervention studies*

### ***Post-hoc exclusion criteria***

- *Studies that evaluate children or/and adolescents religiousness and their attitude toward exercise*
- *Diet and/or nutritionally related studies particularly in relation to the studied population (SDA)*
- *Studies prior to the year 2000*
- *Foreign Language material*
- *Studies that focus on spiritual practice that are not connected with religion or religiosity.*
- *Studies that are not Faith-based or faith-placed*

PRISMA





## 2.3 Studies

The following studies demonstrate potential implications of faith-based PA interventions, and how implementing interventions that incorporate specific religious concepts relevant to the organisation may motivate church members to participate in PA. They also point out the literature gap regarding Adventist religious values, beliefs, and practises in relation to PA. Additionally, the review includes studies that focused on faith-based PA interventions in the religious setting not limited to the Adventist church as this would yield a significant scarcity of literature to review. See table 2 for inclusion and exclusion criteria. See Appendix A for a summary of the key characteristics (sample, research design, and outcomes) of each study.

### 2.3.1 Pilot study of a faith-based PA programme among sedentary blacks (Whitt-Glover et al., 2008)

Whitt-Glover et al. conducted a pilot study to assess the impact of a faith-based PA programme among sedentary African Americans. The study introduced faith-based activities, education, and support within a church context, leading to positive changes in PA behaviors and overall health. This study suggests that faith-based programs are effective in promoting PA and provides a foundation for further exploration in the context of Adventist communities.

While not directly focused on Adventists, the findings of Whitt-Glover et al. (2008) are highly relevant. Adventists, known for their healthy lifestyle, share many principles that align with faith-based PA programmes. By integrating religious beliefs and practices into PA promotion, Adventists may harness the support and motivation provided by their faith community.

This study contributes to the growing body of evidence supporting faith-based PA programmes as a means of improving PA participation and general health. The potential transferability of these findings to Adventist communities in England and Wales is promising, given the strong health-conscious ethos among Adventists. Such programmes can align with Adventist core beliefs and offer a culturally appropriate avenue to encourage healthier lifestyles.

In conclusion, the study by Whitt-Glover et al. (2008) provides a strong foundation for the integration of faith-based PA initiatives within Adventist communities. Although the review touches on the potential of faith-based PA programmes, further exploration is warranted within the Adventist context. By adapting and tailoring faith-based PA initiatives to the unique needs of Adventists, this approach may enhance the understanding of faith's role in promoting PA. This review serves as a stepping stone for future research in this area and offers promise for advancing knowledge in the field.

### 2.3.2 Pastoral perceptions of the learning and developing individual exercise skills

(L.A.D.I.E.S) intervention: a qualitative study

(Gross et al., 2018)

The study by Gross et al. (2018) focussed on a faith-based PA intervention that included an Adventist church. This study is crucial to understanding the connection between faith, pastoral support, and PA. Gross and colleagues conducted a qualitative study to investigate pastoral perceptions of the L.A.D.I.E.S intervention, a faith-based PA program implemented within an Adventist church. The intervention involved pastoral support in motivating and facilitating PA among church members.

The findings of this study revealed that the L.A.D.I.E.S intervention had a significant impact on the perceptions of pastoral caregivers regarding the learning and development of individual exercise skills. Participants reported an increased understanding of the importance of exercise for overall well-being and expressed a greater willingness to support and encourage individuals in their PA journey. Additionally, the intervention was found to enhance the confidence and self-efficacy of pastoral caregivers in promoting PA as a means of holistic growth and development. This study was specifically designed for female members of the church, therefore suggesting that the male members of the church may require a different type of intervention. The findings of this study highlight the importance of pastoral leadership in promoting PA in a faith-based context. Pastors were found to be essential motivators,

offering spiritual guidance and encouragement, which positively influenced PA participation.

The study shows the effectiveness of pastor-led initiatives in motivating church members to adopt healthier lifestyles, including increased PA participation. The relevance of the study extends to Adventist communities in England and Wales, where the holistic health approach aligns well with faith-based interventions. This research contributes significantly to our understanding of faith-based PA, particularly in the context of Adventists. It highlights the vital role pastors play in influencing PA behaviors and offers promise for further exploration and adaptation of faith-based interventions. By embracing and tailoring these programmes to Adventist beliefs and practices, there is a unique opportunity to encourage healthier lifestyles and contribute to our knowledge of the role of faith in the promotion of PA.

### 2.3.3 Sisters in Motion: A Randomised Controlled Trial of a Faith-Based PA Intervention (Duru et al., 2010)

The role of faith-based PA interventions in promoting health and wellness has been extensively studied, yet the specific involvement of the Adventist church remains relatively under-explored in the existing literature.

One notable study that included Adventists was conducted by Duru et al. (2010), which aimed to investigate PA levels among Roman Catholics, African Methodist

Episcopal (AME) congregants, and SDAs (Duru et al., 2010). The study employed the "Sisters in Motion" intervention, targeting women and focusing on adults aged 60 years and older. This age group, often characterised by lower PA rates but potentially higher levels of religious maturity, offered a distinct perspective to explore the effectiveness of faith-based PA interventions.

In their research, Duru et al. (2010) observed high levels of involvement and an increase in steps per week within one denomination, although the specific denomination was not identified in the literature. This piece of information is of utmost importance as it underscores the need for future research to identify the denomination in question. Understanding the unique characteristics and dynamics of this denomination would significantly contribute to our understanding of the effectiveness of faith-based PA interventions and help differentiate the attributions and outcomes within distinct religious contexts.

This critical gap in the literature highlights the necessity of conducting further research specifically focusing on the role of the Adventist beliefs in promoting health and PA interventions. By investigating the involvement of Adventists in faith-based PA initiatives, we can shed light on the potential contributions and strategies employed by the Adventist church to address health disparities and promote PA .

Furthermore, the study by Duru et al. (2010) highlights the importance of considering age-related factors and religious maturity when examining the effectiveness

of faith-based interventions. The findings suggest that older adults within religious congregations may exhibit different patterns of engagement and response to PA interventions compared to younger congregants. This observation further emphasises the need for tailored interventions that consider the unique characteristics and needs of various age groups within religious communities.

By critically reviewing the existing literature and recognising the under-representation of Adventists in faith-based PA intervention studies, this research seeks to address this gap and contribute to the broader understanding of the role of the Adventist beliefs regarding health promotion and PA interventions. By identifying and exploring the specific attributes, strategies, and outcomes within the Adventist context, this study aims to inform future research, interventions, and policies that address the needs of the Adventist, ultimately promoting healthier lifestyles and reducing health disparities.

#### 2.3.4 Church contextual factors associated with Latinos' physical activity and park use.

(Perez et al., 2022)

The study investigated the influence of church contextual factors on PA behaviour among Latinos, specifically examining the role of park use near the church and church PA programming. Although the study did not focus on Adventists, it contributes to the existing literature by providing valuable insights into how church-based factors influence PA behaviour among church members.

The study found that the quality and proximity of the park were positively associated with park use near the church. This suggests that improving the quality of nearby parks and addressing safety concerns can encourage churchgoers to participate in PA in these spaces. Additionally, church PA programming was positively associated with park PA. This highlights the importance of implementing PA programmes within the church setting to promote active lifestyles among church members.

The findings of this study have significant implications for promoting PA within faith-based organisations. By targeting church PA programming and nearby parks, churches can create an environment that supports and encourages PA among their members. This not only promotes better health outcomes but also strengthens the sense of community within the church.

Although the study focused specifically on Latinos, its framework and findings can be applied to other faith-based communities, including Adventists in the UK. Adventist churches can benefit from implementing similar strategies, such as improving park quality, addressing safety concerns, and offering PA programmes tailored to the needs and preferences of their members. These actions can help create an environment that fosters PA and supports the overall well-being of Adventist churchgoers.

In conclusion, the study "Church Contextual Factors Associated with Latinos' PA and Park Use" contributes to the literature review on faith-based PA by providing insights into the influence of church contextual factors on PA behavior. The findings

suggest that targeting church PA programming and nearby parks could be beneficial for improving park use and promoting PA among churchgoers.

### 2.3.5 A Church-Based PA Intervention for African American Women

(Young & Stewart, 2006)

In the realm of faith-based PA interventions, the choice of study design is a critical consideration. Young and Stewart (2006) conducted a randomised controlled trial (RCT) to assess the effectiveness of a faith-based PA intervention among black women (Young & Stewart, 2006). Interestingly, they questioned whether an RCT should be considered the gold standard to initiate a behavioural change toward PA in this specific population.

The study by Young and Stewart (2006) embraced the social cognitive construct, particularly focussing on self-efficacy as a key determinant of behaviour change. However, despite incorporating faith-based aerobic exercise and health lectures, the intervention did not yield a significant increase in PA levels among participants. This finding challenges the notion that faith-based interventions alone can consistently lead to behavioural change in this population.

Young and Stewart identified that, to address the complex nature of behaviour change, it is crucial to acknowledge the various stages through which individuals navigate and that the trans-theoretical model provides a valuable framework for this process. Successful behaviour change interventions should encompass the five aspects



of change within this model, which are precontemplation, contemplation, preparation, ready, action, and maintenance (Fidanci et al., 2017), thereby allowing individuals to progress through the stages at their own pace. Acknowledging participants' readiness for change is essential, as attempting to facilitate significant and lasting change in individuals who are not ready may yield limited success.

This inclusion would acknowledge and demonstrate the sensitive approach needed for study participation. Similarly, successful behaviour change intervention must also acknowledge the various stages in which a person navigates, thus applying the five aspects of change within the transtheoretical model through which one journeys. In addition, one cannot affect significant lasting change for which they are not ready.

Moreover, a sensitive approach to study participation is crucial within faith-based PA interventions. Recognising the cultural, religious, and social factors that influence individuals' behaviors and beliefs is essential for effective intervention design and implementation. By incorporating culturally sensitive strategies, interventions can better align with participants' values, beliefs, and cultural identities, ultimately enhancing engagement and the potential for positive outcomes.

Therefore, to advance our understanding of faith-based PA interventions among black women and to design interventions that are more likely to promote behaviour change, it is necessary to critically examine the limitations of traditional study designs such as RCTs. Exploring alternative approaches that consider the unique needs,

preferences, and contextual factors of the target population can provide valuable insights and improve intervention effectiveness.

### 2.3.6 A Faith-Based PA Intervention for Latinos: Outcomes and Lessons

(Bopp et al., 2011)

The study conducted by Bopp et al. (2011) focused on understanding attitudes toward PA and behavior change in religious organisations using the Faithful footsteps program. This study emphasised the importance of culturally suitable PA programs for the target population, as researchers recognised the potential need for countermeasures if the programme is unsuitable. The authors highlighted the significance of partnership and collaboration between researchers and religious organisations in structuring culturally appropriate PA intervention programs (Peterson et al., 2002). This approach not only helps eliminate avoidable pitfalls, but also strengthens trust and adherence to the programme.

The findings of Bopp et al. (2011) underscored the influence of deeply held cultural identity and values in shaping attitudes towards faith-based PA interventions. To effectively implement intervention programmes within culturally diverse religious organisations such as the Adventist church a degree of cultural awareness is essential (Banta et al., 2018; Williams, 2020). However, the lack of PA interventions specifically targeting Adventist churches in England and Wales has resulted in a lack of evidence on culturally applicable tenets in PA interventions for Adventists.

A critical analysis of the literature reveals the need for further research to address the gap in knowledge regarding culturally tailored PA interventions within the Adventist church. By developing interventions that align with the cultural values, beliefs, and practices of SDAs, researchers can enhance the effectiveness of PA programs and increase their impact on health outcomes. Additionally, recruiting volunteers from the Adventist church to deliver these interventions can be a fruitful strategy, as they have a better understanding of cultural nuances and can establish stronger connections with the participants.

To advance the field of faith-based PA interventions, future studies should incorporate rigorous methodologies, such as RCTs, while also considering the unique cultural contexts and diverse demographics within religious organisations. This critical approach will allow researchers to gain a deeper understanding of the specific needs and preferences of the target population and develop interventions that resonate with their cultural identity. Furthermore, evaluating the long-term sustainability and effectiveness of these interventions is crucial to establish evidence-based practises that can be widely implemented.

### 2.3.7 Programme Implementation and Health Behaviours of Church Members in a Countywide Study of the Faith, Activity, and Nutrition Programme (Bernhart et al., 2021a)

The study by Bernhart et al. (2021) aimed to evaluate specific components of the F.A.N intervention (Faith, Activity, Nutrition) and understand how to support members

in achieving desired outcomes within a religious setting. The churches involved in the study were Baptist and nondenominational. Four aspects were assessed: pastoral support, increased PA message, increased church policies and guidelines related to health promotion.

The study adopted the social ecological model (SEM) perspective, which recognises the importance of connecting intervention programmes with various levels of influence. However, one notable omission in the study was the measurement of religiosity, a key aspect of faith-based identity. To fully understand the impact of the intervention, further research is needed to explore and measure levels of religiosity within the context of PA adherence. Examining participants' behaviors before and after the intervention would provide valuable insights into the effectiveness of the program.

Furthermore, investigating the relationship between religiosity and PA adherence may uncover patterns and associations that have not been previously explored. Understanding whether physical health influences spiritual health or vice versa would contribute to a more thorough understanding of the interaction between these factors.

To improve the critical analysis of the study, it is important to consider potential limitations and areas for future research. Firstly, the study focused on Baptists, and nondenominational churches, limiting the generalisability of the findings to other

religious contexts. Future studies could include a more diverse range of religious denominations to capture a broader representation of faith-based interventions.

Furthermore, the study would benefit from incorporating quantitative measures of religiosity, such as standardised scales, to obtain a more precise assessment of participants' religious beliefs and practises. This would allow for a more nuanced understanding of the influence of religiosity on PA adherence.

The study therefore evaluated the F.A.N intervention within Baptist and non-denominational churches, providing valuable insights into the role of pastoral support, PA messaging, and church policies in promoting health. However, the omission of measuring religiosity limits the understanding of the impact of the intervention. Future research should address this gap by exploring the relationship between religiosity and PA adherence and expanding the study to include a wider range of religious denominations. By doing so, researchers can better tailor faith-based PA interventions to meet the diverse needs of religious communities and promote positive health outcomes.

### 2.3.8 The Effect of Changes in Health Beliefs among African American and Rural White Church Congregants Enrolled in an Obesity Intervention: A Qualitative Evaluation (Martinez et al., 2016)

Martinez (2016) conducted a faith-based intervention study among two African American churches and a rural white church congregation in America, with the aim of

examining health knowledge, attitudes, and behaviours within these religious settings. The evaluation provided an opportunity to assess the health beliefs and attitudes of church members in relation to their beliefs.

The study used the Health Belief Model to examine attitudes and behaviours but revealed a discrepancy between participants' perceived health beliefs and their actual knowledge of health. This presents a logical contradiction, as relying solely on individuals' perceptions of the consequences of an illness and their susceptibility to it may not effectively promote lifestyle change.

By focussing on attitudes and behaviours towards the promotion of health and PA, Martinez's study contributes to the understanding of health-related knowledge and practises within religious congregations. However, it also highlights the need for improved clarity and effective delivery of lifestyle initiatives in faith-based intervention programmes, regardless of the holistic content of the health beliefs espoused.

### 2.3.9 Two-year outcomes of Faith in Action: a randomized controlled trial of physical activity promotion

(Arredondo et al., 2022)

The study addresses an important gap in the literature by examining the effectiveness of a faith-based PA intervention among Latina women from 16 churches, a population known for lower levels of leisure-time PA compared to non-Latina white women. The use of a cluster randomised controlled trial design and a sample size of 436

participants from 16 churches strengthens the validity and generalisability of the study. The assessment of outcomes at baseline, 12 months, and 24 months provides valuable insights into the long-term impact of the intervention.

The findings of the study reveal several remarkable aspects. The intervention group exhibited significant increases in self-reported leisure-time moderate to vigorous PA at 24 months, even after adjusting for sociodemographic factors. This suggests that the faith-based intervention positively influenced the participants' perceived engagement in PA. While the marginal increases in accelerometer-assessed moderate to vigorous PA at 24 months were not statistically significant, they still indicate some positive trends.

However, it is important to acknowledge certain limitations. The study did not find significant changes in light intensity activity, sedentary time, body mass index, or waist circumference. This suggests that the intervention may have had limited effects on these secondary outcomes. Additionally, the use of self-reported measures for PA may introduce biases and subjectivity, potentially affecting the accuracy of the reported results.

To enhance the effectiveness of faith-based PA interventions, it is crucial to consider strategies that address relapse and maintain PA behaviours beyond the initial change of behaviour. Integrating low-cost strategies such as activity trackers and mobile apps, which incorporate evidence-based behavioural strategies like goal setting,

reminders, feedback, and accountability, may offer promising avenues for long-term support and maintenance of PA .

### 2.3.10 Evaluation of a faith-based healthy lifestyle program.

(Manget & Sands, 2008)

In the field of faith-based interventions that promote PA, research has shown promising results in improving health behaviours and outcomes among participants. Manget and Sands (2008) assessed more than 18 healthy lifestyle variables, including PA, within a faith-based context. The study reported significant behavioural outcomes across all variables, with particular emphasis on the positive impact of PA interventions. However, it is important to note that the specific religious denomination and setting in which the study took place were not documented, limiting the generalisability of the findings.

To advance our understanding of the causal pathways and mechanisms underlying changes in PA-related attitudes within faith-based settings, more research is needed that specifically identifies the religious context and denomination involved. This information is vital, as it can provide valuable information on the unique beliefs, values, and practises that can influence the motivation or demotivation of church members to participate in PA. Additionally, exploring participants' perceptions of the factors that initiate and sustain their motivation for PA within a religious framework is crucial for designing effective interventions.



While Manget and Sands (2008) suggested that combining PA interventions with teachings on the importance and benefits of PA can lead to better behaviours, there remains a relative scarcity of studies investigating the specific impact of religious ideas, beliefs, values, and practises on PA motivation among church members. This knowledge gap calls for further research to delve deeper into participants' perspectives, shedding light on the intricacies of their motivations and providing a foundation for the development of tailored interventions that effectively address the unique cultural and spiritual needs of faith-based populations.

Finally, although existing research highlights the potential of faith-based interventions in promoting PA, the current literature falls short in providing a comprehensive understanding of how specific religious contexts and denominations influence PA-related attitudes and behaviors. To fill this gap, future studies should incorporate detailed descriptions of the religious setting and denomination involved, allowing the exploration of causal pathways and mechanisms underlying changes in PA motivation. By gaining a deeper understanding of participants' perceptions and motivations, researchers can develop culturally sensitive and spiritually relevant interventions that improve participation and adherence among faith-based populations.

### 2.3.11 Promoting physical activity among churchgoing Latinas

(Arredondo et al., 2017)

The study by Arredondo et al. (2017) aimed to promote and assess PA among church-going Latinas. Although the study did not focus on Adventists, its findings can

still provide valuable insights into faith-based PA. The study utilised a community-engagement approach and a quasi-experimental design to examine the effectiveness of a church-based intervention in promoting PA among Latina church members.

The study's findings revealed several important insights that have relevance for promoting PA among Adventists and other religious organisations. The intervention, which included culturally tailored materials, group sessions, and individual goal setting, resulted in significant increases in self-reported moderate-to-vigorous PA among the participants. This suggests that faith-based interventions can be effective in promoting PA behavior within a church setting.

Furthermore, the study found that social support from church members played a significant role in promoting PA behavior. The participants reported that the social support they received from their church community, including encouragement, accountability, and shared activities, positively influenced their PA engagement. This finding solidifies the importance of fostering a supportive environment within faith-based communities to encourage and sustain PA behavior among church members.

The study also highlighted the significance of cultural relevance in promoting PA among Latinas. By tailoring the intervention materials and activities to the cultural preferences and values of the participants, the study demonstrated the importance of incorporating cultural sensitivity into faith-based PA programs. This finding also suggests that understanding the practices and beliefs of Adventists in England and Wales relative

to PA is crucial in developing effective interventions within this specific religious community.

In conclusion, while the study was not conducted among Adventists, its findings provide valuable insights into the effectiveness of faith-based interventions in promoting PA behavior within a church context. The study's emphasis on social support, cultural relevance, and the role of the church community aligns with the aim of understanding the practices and beliefs of Adventists in England and Wales relative to PA. By targeting church PA programming and fostering supportive environments, faith-based interventions have the potential to positively influence PA behavior among Adventists and other church members.

### 2.3.12 A comparison of health locus of control and physical activity among Seventh day Adventist and non-Seventh day Adventist (Feiler & Ngo, 2022)

The study conducted by Kimberly E. Feiler and Han Gia Ngo (2022) explored the relationship between health locus of control (HLOC) and PA among Adventists and non-Adventist individuals. This review of the literature examines the study's contribution to the broader goal of exploring the influence of religious beliefs and practices on PA behaviour among church members, particularly within the Adventist church.

The study by Feiler & Ngo (2022) included participants from Adventist institutions of higher education in California. The researchers used a quantitative approach to measure HLOC and PA levels among the participants. The HLOC Scale was

used to assess internal, external-chance, and external-powerful others HLOC, while PA was measured using self-report questionnaires.

The study found that the internal HLOC was a positive predictor of general health among the participants. However, none of the HLOC categories was significant predictors of PA. Furthermore, other externally powerful HLOCs were negatively associated with physical functioning. The findings suggest that individuals with a stronger belief in internal control over their health are more likely to report better general health.

The study's findings contribute to the literature on the influence of religious beliefs and practices on PA behavior among church members. By specifically examining the Adventist religion, the study provides valuable insights into the practices and beliefs of Adventists in relation to PA. Although the study did not directly explore the impact of religious beliefs on PA, it indirectly contributes to the literature by highlighting the importance of internal HLOC in predicting general health among Adventists.

Understanding the role of HLOC, PA, and health-related quality of life (HRQoL) can aid in the development of targeted health interventions for behavior change among Adventist church members. The findings of the study done by Feiler & Ngo (2022) emphasise the importance of promoting internal control beliefs regarding one's health among Adventists to enhance general health outcomes. Health professionals and religious leaders can use these findings to design effective interventions that align with the religious beliefs and practices of the Adventist community.

In conclusion, the study conducted by Feiler and Ngo (2022) makes a valuable contribution to the literature on the influence of religious beliefs and practices on PA behaviour among Adventists. The findings highlight the importance of internal HLOC as a predictor of general health among Adventists and emphasise the need for customised interventions that align with religious beliefs. Further research in this area can provide a deeper understanding of the complex relationship between religious beliefs, practices, and PA behaviour, ultimately leading to more effective health interventions for church members.

## 2.4 Conclusions

The Adventist church exhibits a distinctive identity characterised by the integration of holistic health messages within its doctrine (Jo et al., 2012; McClatchy et al., 2013). The relationship between Adventist religion and health appears to be mediated, at least in part, through religiously centred or faith-based intervention programmes. These programmes serve as a medium for promoting healthy lifestyles, providing social support, and facilitating psychological regulation (Morton et al., 2017). The association between regular PA, church activity, and religious participation has been consistently linked to a reduced risk of all-cause mortality (Ahrenfeldt et al., 2023; Chen et al., 2020a; Koenig et al., 2011; Merrill & Thygeson, 2001; Morton et al., 2017; Wilcox et al., 2010).

However, despite the growing body of evidence suggesting a positive relationship between PA and religiosity (Hita et al., 2021), there is still some ambiguity surrounding this association, necessitating further exploration (Faries et al., 2020). Additionally, while faith-based interventions have shown promising trends, their impact on PA behavior at a larger scale remains uncertain. Therefore, it becomes imperative to investigate the internalisation of religious orientation or perceived religiosity in relation to PA, as this may shed light on motivational factors that influence compliance with PA messages and behaviours.

Culturally relevant PA programmes, aligned with the concept of enjoyment by individuals and incorporating structural support, have been found to increase participation in intervention programs (Tristão Parra et al., 2018). Recognising the potential of faith-based organisations, the Centre for Disease Control and Prevention (CDC) in the United States recommends their participation in facilitating a pragmatic approach to PA promotion, not only among church members but also within the broader community (Tristão Parra et al., 2018). This highlights the significant public health implications of engaging religious organisations to address the growing epidemic of non-communicable diseases.

Furthermore, considering the absence of collaboration between the British government, Public Health England, and religious organisations in England and Wales on this subject, harnessing such partnerships could offer an effective strategy for addressing physical inactivity and broader health issues. Thus, based on the findings of

this review of the literature, there is a clear direction for future research: a focused investigation of the relationship between internalised religiosity, as understood within the context of Adventism in England and Wales, and compliance with PA messages and behaviours. This research effort, conducted at the highest level of scholarly rigour, will provide valuable insights, and contribute to advancing public health policies and interventions in this population.

The common themes and learning points from the literature on faith-based PA interventions include the positive impact of these programs on primarily minority populations, such as sedentary blacks, African American women, and Latinos. Studies have consistently shown that faith-based PA interventions have been successful in promoting PA among these populations, which historically faced barriers to engaging in regular PA (Arredondo et al., 2022; Haughton et al., 2020a). This is particularly important as research has shown that minority populations are disproportionately affected by chronic diseases related to physical inactivity.

Furthermore, the literature emphasises the importance of church contextual factors in facilitating PA among church members. Pastoral perceptions and church-based implementation have been identified as key factors that influence the success of faith-based PA interventions. Church leaders therefore play a crucial role in promoting PA within their congregations by providing guidance, support, and encouragement (Williams & Cousin, 2021). They can also serve as role models for their members, demonstrating the importance of incorporating PA into their daily lives.

In addition to church contextual factors, the literature highlights the need for culturally tailored interventions that align with the specific beliefs and practices of different religious groups. This is particularly relevant in the case of the Adventist faith, which has unique structures, beliefs, and practices that may influence the attitudes and behaviors towards PA among its members. However, despite the growing number of Adventists worldwide (Seventh-day Adventist church, 2021), there is a lack of research that examines the impact of their faith relative to PA.

Therefore, this study aims to fill this gap in the literature by investigating how aspects of the Adventist faith, such as health promotions and religious beliefs, influence the attitudes and behaviors towards PA among its members. By exploring these factors, the study seeks to provide valuable insights into the role of religion in shaping PA behaviors and inform the development of culturally sensitive interventions for the Adventist community in the UK and Ireland.

Based on the existing literature, it is evident that the methods and content of this study should utilise qualitative methods to explore the beliefs and perceptions of Adventist members regarding PA. This will allow for a deeper understanding of the factors that influence their attitudes and behaviours towards PA. By conducting interviews and focus groups, the researcher can gain insight into the motivations, barriers, and facilitators of PA within the Adventist church in the UK and Ireland.



Furthermore, it is essential to incorporate quantitative measures to assess the actual participation in PA among Adventist members. This will provide objective data on the level of PA within the church and allow potential comparisons with other populations. By using validated measures, such as questionnaires, the researcher can obtain data on PA levels of Adventist individuals within the UK and Ireland.

## Chapter 3 Methodology of the study

### 3.1 Introduction

This purpose of this chapter is to outline the procedures used to conduct the study among Adventists in the UK and Ireland. Therefore, the overall approach to this study is highlighted in the chapter. The overarching research aim is to investigate the influence of Adventist beliefs, values, and practices on PA in the UK. This research adopts a mixed methods approach, encompassing both qualitative and quantitative methodologies, to provide an understanding of the topic. The study is divided into three distinct stages, enabling an examination of how Adventist beliefs and practices relate to PA in the UK.

My fundamental view is that both religiosity and PA are on the one hand, measurable things, they can be compared and correlated. However, on the other hand there is much more to these variables than one may measure because they are both human cultural products. Religiosity and PA engages the human nature emotionally and affectively at different levels. Hence, simply measuring religiosity and PA would not be enough to explain or show how these two concepts (religiosity and PA) interact.

The three stages of the sequential mixed-method design provide a valuable framework for gaining in-depth insights (Baig et al., 2020), into the intricate relationship between religiosity and PA. This research approach involves a combination of qualitative exploration, survey implementation, and focus group sessions, which collectively

contribute to a better understanding of this complex dynamic. By employing these three stages, the researcher can explore the various facets of religiosity and PA, examining their interplay and potential impact on one another.

The exploratory sequential approach of the study has been adapted to incorporate a three-stage design, aligning with the framework proposed by Baig (2020), (Baig et al., 2020). This modification allows for a more nuanced exploration of the relationship between religiosity and PA by integrating qualitative exploration, survey implementation, and focus group sessions. This approach is consistent with Creswell (2021) assertion that a sequential mixed-method design can enhance the depth and breadth of understanding in complex research areas by progressively building on insights gained from each stage (Clark et al., 2007; Creswell, 2021; Innes et al., 2021).

The first stage of the sequential mixed-method design involved a qualitative investigation. This entails conducting interviews and thematic analysis to gather rich and nuanced data on individuals' religious beliefs, practices, and experiences relative to PA. Through this qualitative phase, the researcher can uncover the underlying motivations, values, and meanings associated with religiosity and how they relate to PA. By delving into the subjective experiences and perspectives of individuals, a more holistic understanding of the role of religion in shaping PA behaviors can be achieved (Kumar & Ansari, 2023).

Following the qualitative exploration, the second stage of the design involves survey implementation. Surveys provide a quantitative means of collecting data from a larger sample size, allowing for generalisations and statistical analyses (Lakens, 2022). By administering surveys that include questions related to religiosity and PA, the researcher can collect data on the prevalence, frequency, and intensity of religious practices and their association with PA levels. This stage helps to establish patterns, trends, and correlations between religiosity and PA, providing a broader perspective on the relationship between the two variables.

The final stage of the sequential mixed-method design involves conducting focus group sessions. These sessions bring together individuals who share similar religious affiliations or experiences to participate in group discussions facilitated by the researcher (Brisbane, 2024). Through these interactive sessions, participants such as pastors and health leaders can share their perspectives, beliefs, and experiences related to religiosity and PA. Focus group discussions allow for a deeper exploration of the social and cultural factors (Nadeem et al., 2024) that influence the relationship between religiosity and PA. By examining the collective experiences and perceptions of the participants, the researcher can gain insight into the broader impact of religious communities, practices, and support systems on PA behaviours.

By combining these three stages, the sequential mixed-method design offers a multi-dimensional approach to studying the relationship between religiosity and PA. It allows the researcher to explore the intricate interplay between religious beliefs,

practices, and church dynamics and their influence on people's participation in PA. This holistic examination sheds light on the potential mechanisms through which religiosity can impact PA, providing valuable information for health promotion interventions, policy development, and future research in this field.

In line with the exploratory sequential design adopted in this study, the initial phase placed a primary emphasis on qualitative exploration. This qualitative phase assumed a dominant status, with the aim of gaining a deeper understanding of the sensitivities, perceptions, and integration of the Adventist population. Through in-depth interviews of participants, valuable insights were obtained regarding the research topic, facilitating the identification of potential modifications or adjustments required for the subsequent phases.

Based on the data collected during the qualitative exploration, adaptations were made to the research instruments and methodologies for the next phase of the study, which employed a quantitative approach. These adaptations were based on existing research instruments gathered from previous studies (Leibow et al., 2021; Morton et al., 2017), ensuring that the study maintains a rigorous and validated approach. By utilising established instruments, the study aims to build upon existing knowledge and contribute to the field in a meaningful way. This quantitative phase aimed to gather objective and quantifiable data suitable for the study population. Through surveys or questionnaires customised to the specific needs and characteristics of the Adventist

population, relevant information was collected to further investigate the relationship between Adventist beliefs, values, and practises and PA.

Furthermore, the study incorporated a third stage consisting of focus groups. In this phase, Adventist leaders, namely pastors and health leaders, were invited to participate in focus group sessions. These sessions provided a platform to explore their perspectives and insights, given their significant influence on behaviour and health promotion within the church community. This phase, distinct from the semi-structured interviews in Phase 1, strategically engaged influential figures who play pivotal roles in shaping health-related practices and beliefs within the Adventist context. The choice of focus groups facilitated dynamic discussions, allowing for the exploration of shared perspectives, communal norms, and the interactive influences that contribute to the integration of PA within the Adventist church. By focussing on the insights of pastors and health leaders, this phase unveiled nuanced leadership perspectives, group dynamics, and potential strategies to improve health promotion efforts within the church. The focus group format offered a unique lens through which to understand the interplay between Adventist beliefs and PA, enriching the overall depth and breadth of the study.

The interpretation phase integrated the qualitative, quantitative, and focus group data, allowing for an analysis of the entire dataset. By conducting the qualitative and quantitative components sequentially and then integrating the data at the

interpretation phase, the study maintained the integrity and distinctiveness of each data type, contributing to the scientific rigor and scholarly nature of the research.

For this research, consideration was given to the myriad of factors that shape the worldviews of the participants, including sociocultural influences, values, and beliefs. This recognition of individual complexities guided my methodological choices. Understanding that these factors could influence participant engagement, particularly within focus group settings, influenced the design of my study. To address potential inhibiting factors, I structured the research methodology to encourage a conducive and inclusive environment, fostering open dialogue while being mindful of diverse perspectives. This methodological approach aimed to capture a more authentic representation of participants' views, mitigating potential biases introduced by individual or group dynamics. This would likely encourage a more socially accepted and stereotypical attitude and response from participants.

### 3.2 Ontology

The ontological framework of this study navigates the complexities of religious dimensions and their association with healthy behaviour change (Bernhart et al., 2021a; Koenig, 2012; Krause et al., 2017). A realist approach forms the foundational stance, underpinned by empirical and socially determined data that demonstrate a positive correlation between religion and healthy habits. The acknowledgment of measurable

elements, such as PA routines, amplifies the realist orientation, emphasising not only the existence of empirical realities but also the exploration of their natural relationships.

The study aligns with a critical realist ontology, delving beyond mere recognition of what is real and empirical to probe into how these elements interrelate (Parra et al., 2021; Ruslin, 2019). Critical realism therefore advocates for integrating various research methods rather than exclusively relying on either quantitative or qualitative approaches (Danermark, 2019; Danermark et al., 2019; John & Standing, 2017). By combining quantitative and qualitative methods, researchers can gain a more comprehensive understanding of complex social phenomena (Tseng, 2024).

In parallel, a constructivist lens is employed to complement the realist approach (Golafshani, 2015). Particularly significant when scrutinising the motivations and beliefs surrounding PA, the constructivist perspective recognises that individuals' perceptions are shaped by social contexts and human customs. Qualitative methods and a phenomenological approach serve as tools to unearth the subjective experiences and interpretations of participants (Noh & Shahdan, 2020). The coexistence of a realist approach and a constructivist lens creates a systematic framework for understanding the intricate interplay between measurable realities and individual perceptions.

Therefore, the research design under consideration is underpinned by a realist approach, a methodological stance further fortified through the incorporation of measurable elements. The inclusion of quantifiable aspects, such as tracking the number



of minutes devoted to PA, serves as a testament to the study's dedication to capturing empirical and tangible data. However, this commitment to measurability does not negate the pivotal role of the constructivist lens. Rather, it accentuates the study's conscientious effort to strike a balance between empirical rigour and a profound exploration of lived experiences and perceptions contributing to the overarching phenomenon.

This nuanced integration of perspectives is discernible in the empirical and socially determined data (Clark et al., 2007). This data set not only substantiates the reality of the phenomenon under scrutiny, but also points to the intricate web of relationships involved. The adoption of a realist approach within the research framework acknowledges the palpable influence of factors such as religious beliefs and PA habits. Concurrently, the utilisation of a constructivist lens facilitates a deeper probing of the subjective dimensions within these realms (Denicolo et al., 2016), thereby recognising the impact of individual experiences and interpretations within the broader social and cultural context.

The rationale behind opting for a critical realist ontology emanates from a deliberate departure from a simplistic acknowledgment of empirical realities (Edwards et al., 2014). This ontological choice aligns seamlessly with the overarching objective of the study, which seeks not only to identify what is empirically real but also to unravel the natural relationships existing among various elements. By acknowledging and

embracing the inherent complexities within the phenomenon under investigation, the adoption of a critical realist ontology strategically guides the study toward a more nuanced and integrated exploration.

### 3.3 Epistemology

The epistemological foundation of this study adopts a dual stance, encompassing both constructivist and positivist perspectives (Al-Ababneh, 2020; Al-Saadi, 2014). A constructivist orientation is evident, emphasising the diverse meanings and interpretations that individuals attribute to the phenomenon under investigation. Through qualitative methods, particularly semi-structured interviews, the researcher engages with the lived experiences of participants. The interpretive nature of this approach allows for a nuanced exploration of the social and cultural norms influencing participants' views.

Simultaneously, a positivist stance is integrated, particularly when dealing with elements amenable to quantification. The study incorporates objectively measured data, such as the number of minutes spent on PA. This positivist approach follows a deductive method, extracting accurate knowledge from directly observable and measurable phenomena. The coexistence of these epistemological stances recognises the multifaceted nature of the research question, where some aspects can be measured and quantified, while others necessitate a more interpretive and subjective understanding.

The constructivist epistemology is rooted in the understanding that knowledge is derived not only from lived experiences but also from the subjective impressions and interpretations of individuals (Farrokhnia et al., 2022; Hyde, 2021; Mohammed & Kinyó, 2020; Shah Ph & Kumar, 2019). The qualitative methods employed in the study serve as a conduit for capturing the richness of participants' perceptions and beliefs, allowing for an in-depth exploration of the social and cultural influences that shape their views.

Conversely, the positivist stance comes into play when dealing with elements that lend themselves to quantification (Farndale et al., 2023). The inclusion of objectively measured data introduces a level of rigour, ensuring a systematic and deductive analysis of certain aspects of the phenomenon (Casula et al., 2021). This duality in epistemological orientation reflects an acknowledgment of the complexity inherent in the social phenomenon under investigation.

The justification for this dual epistemological approach lies in the recognition that the research question demands a comprehensive understanding. While the constructivist perspective is essential for interpreting and contextualising individual experiences (Qamar, 2023), the positivist stance contributes a level of objectivity and measurability (Ugwu et al., 2021). The combination of these epistemological orientations enables an exploration of the intricate relationships between religion, PA, and healthy behavior changes.

Dual epistemology does not seek to reconcile the differences between the constructivist and positivist perspectives, but rather to leverage their respective

strengths (Levitt et al., 2022; Tekin & Kotaman, 2013). As a researcher, engaging participants through qualitative methods involves interpreting their views and perceptions of the phenomenon and the world in which they live. This recognition that interpretations, meanings, and knowledge are diverse among individuals aligns with the constructivist emphasis on understanding the subjective nature of experiences (Levitt et al., 2022).

In conclusion, the epistemology of this study is characterised by a dynamic interplay between a constructivist and a positivist stance. This dual approach aligns with the inherent complexity of the research question, allowing for a nuanced exploration that captures both the subjective richness of individual experiences and the objective measurability of certain elements.

### 3.4 Research Ethics

In conducting this research, rigorous ethical standards were upheld to ensure the study's integrity and the welfare of participants. Informed consent was paramount, with all participants being thoroughly briefed on the research's objectives, methodologies, and potential risks before their involvement, following best practices in ethical research (Xu et al., 2020). Measures were taken to protect participants' privacy and confidentiality; data were anonymised and securely stored in compliance with UK government guidelines (User Research Community, 2018).

The study also emphasised inclusivity and equity, ensuring diverse participant representation and addressing potential biases, thereby enhancing the validity and

reliability of the study (Smith, 2021a). The research protocol received approval from the Staffordshire University Ethics Committee, which confirmed the adherence to ethical guidelines for human subjects research (White, 2020). These steps collectively ensured that the research was conducted ethically, safeguarding participant rights and contributing to the credibility and rigour of the findings.

### 3.5 Stage 1: Qualitative Exploration of Adventist beliefs, Values, and Practices Relative to PA

In this first stage of the study, a qualitative exploration was conducted to investigate the role of Adventist beliefs, values, and practices in England and Wales relative to PA. The primary objective was to gain in-depth insight and understanding of how Adventist beliefs and practices influence PA behaviours among individuals within this population. Given that this was a mixed method study, organised sequentially, allows for direct inferences on the factors that might be at issue as generated from each preceding study, thereby informing not just the next phase but a better understanding of individual perspectives about the phenomenon. Thus, for the initial study I chose an interview study (semi-structured) rather than a focus group study because of the opportunity to extract vital information from a one-to-one setting that would not otherwise be obtained in a focus group or focus group interviews (Guest et al., 2017). Additionally, there may be more microscopic or intangible factors, such as motivation

and devotion, related to the phenomenon being explored that may not be prominent within a focus group setting.

The interview guide was informed by both the research topic, which required exploration of the lived experience of individuals within the study population, and the research gap that examined the intersection between Adventist beliefs regarding PA and how this health behaviour is integrated within an individual's religiosity and doctrinal affiliation.

Participants were selected purposefully to ensure representation across diverse backgrounds and experiences within the Adventist church. Through open questioning the study aimed to uncover the various dimensions of Adventist beliefs, values, and practises that shape attitudes and behaviours toward PA.

### 3.6 Stage 2: Quantitative Survey Measurement of Religiosity and PA

The quantitative method was used to investigate religious beliefs and PA behaviors among Adventists aged 18 and older, in the UK. A survey was constructed based on qualitative findings that allowed self-recall measurements of levels of religiosity and levels of PA. This methodological shift was deliberate, opting for a survey over other quantitative techniques, such as experimental research, based on its ability to efficiently capture a broad spectrum of responses from a sizable participant pool. Surveys provide a structured framework for data collection (Davis et al., 2023; Deepa et

al., 2022; Kelling et al., 2019), allowing standardised assessments of variables between diverse individuals.

### 3.7 Stage 3: Qualitative Exploration of Adventist Pastors and Health Leaders

#### Perspectives on PA

Given the structured nature of surveys and their inherent limitation in capturing the nuanced perspectives of individuals, the inclusion of focus group sessions was strategic. This qualitative exploration sought to contextualise and enrich the quantitative data by providing a platform for in-depth discussions. Focus groups allowed exploration of the underlying reasons and contextual factors that influence PA behaviours among Adventists, as perceived by pastors and health leaders.

The methodology employed semi-structured focus group sessions, fostering open dialogue, and encouraging pastors and health leaders to share their insights on the interplay between religious beliefs and PA behaviors within the Adventist church. The participants were purposefully selected to ensure a diverse representation of the Adventist church in the UK.

The focus group phase aimed to uncover the intricate dynamics and contextual factors that may not have been fully captured in the quantitative phase. By engaging pastors and health leaders, who serve as influential figures within the church (Sidibé et al., 2019; Sklar & Goldman, 2023), the study sought to gain a holistic understanding of the challenges, motivations, and influences shaping Adventist participation in PA.

Therefore, this PhD research seeks to articulate and address the question: "What is the impact of Seventh-day Adventist beliefs, values, and practices among its members toward PA?". The study examines how religious doctrines, cultural values, and ecclesiastical teachings influence the behaviour of PA within the Adventist community. By analysing scriptural health guidelines, the integration of spiritual and contemporary health recommendations, and the roles of pastoral leadership and community support, this research provides a comprehensive understanding of how religious frameworks shape PA patterns. This inquiry will offer valuable insights into the intersection of faith and health, contributing to both religious studies and public health fields.

### 3.8 Researcher's Position Statement

There are biases within any research study, some would argue more so when one is affiliated and is strongly committed to the religious organisation (RO) on which the study is conducted. Although there are enviable advantages of this connection, which is vital for access and ease of dissemination of the content and structure of the study, it is not without potential disadvantages. Indeed, having a good level of communication and connections within the Adventist church can potentially impact the degree to which information is shared by participants, which can bring into question the validity of the data set.



In my capacity as the researcher, I ensured clarity regarding my position during interactions with participants. The overarching objective was to gather insights from individuals who possessed personal experiences, attitudes, perceptions, and beliefs relevant to the research topic. I explicitly communicated my affiliation as an Adventist and provided a clear delineation of the study's objectives. As part of my role extension, I aimed to delve into the thoughts and feelings of study participants concerning the subject matter.

One facilitating factor in achieving this objective was the mode of conducting interviews, primarily through the Teams platform and telephone. This approach allowed participants to engage from the comfort of their own homes, fostering an environment where they were generally more at ease in sharing their thoughts and opinions.

To improve the credibility and trustworthiness as a researcher conducting qualitative research is to engage in reflexivity. Reflexivity is a method that takes advantage of the subjectivity of the researcher (Smith, 2006). In this role as researcher, I carefully discerned the attributing factors influencing both my internal and external responses to participants' views. I remained highly mindful of the elements shaping my relationship to the research topic and the study participants. According to Etherington, (2004), it is these influences that determine the personal, cultural, and theoretical constructs which provides a compass for our interactions in the research and represent the findings (Etherington, 2004).

While conducting one of the interviews, a noteworthy occurrence transpired wherein the trajectory of questioning or discussion unexpectedly shifted towards the researcher. This took me by surprise for a couple of reasons. First, the unexpected nature of the redirection momentarily unsettled the dynamics of the interview. Second, the participant, despite my current lack of a leadership role, addressed me as if I were still occupying such a position. This unique aspect shows a phenomenon within faith-based organisations, particularly within the Adventist church, where individuals tend to be perpetually associated with previously held roles. It appears that although the role I had occupied prior to this study (health leader) was relinquished, there persists a perception of continued functional association with that role, influencing the course of subsequent discussions.

This is a very important aspect in relation to understanding my role as the researcher among a faith-based organisation to which I am not only affiliate with, but have a level of religious commitment, and involvement. Developing the skill of being on the inside (as an Adventist) but conducting the study from the outside is scaffolded by constructive reflection and supervision. This enables the researcher to have a conscious and consistent awareness of an openness approach towards obtaining, understanding, and interpreting the lived experience of the participants.

Additionally, understanding the difference between hearing what I am listening to and listening to what I am hearing actively eliminates elements of biases that may exist. The latter is aided pragmatically by the intermittent pauses to think first or small

laughter before answering the question. Furthermore, the researcher used bracketing to reflect on potential bias or contributions that his own religious identity contributed.

## Chapter 4 Semi-Structured Interviews Study

### 4.1 Introduction

The investigation of health promotion within the Adventist church is a holistic exploration that seeks to unravel the intricate interplay between Adventist beliefs and health practices. Grounded in previous foundational works (Haughton et al., 2020a; Maxwell et al., 2022; Sidibé et al., 2019), this interview study aligns with the growing body of literature emphasising the significance of faith-based initiatives in promoting health, particularly when guided by pastoral involvement.

In the context of this research, the initial phase involved the application of semi-structured interviews as a qualitative methodology. This methodological choice was informed by its ability to capture the richness and depth of individual perspectives while affording the flexibility to explore emergent themes within the unique context of Adventist beliefs and practices. The interviews were designed to investigate the beliefs, behaviours and experiences related to health and PA within the Adventist church.

The participants of these interviews represented a diverse cross-section of the Adventist church, including lay members, pastors, and health leaders. This diverse selection aimed to capture a range of perspectives and experiences related to health promotion within the Adventist Church. Similar to McKenzie et al (2015), the interviews were designed to explore facets of the health message within the Adventist church. By directly engaging participants, I probed their perspectives on the church's approach to

specific health behaviours, particularly focussing on PA. Through open questions and in-depth discussions, my goal was to unveil not only what principles the church emphasises, but more importantly, how people perceive and actively integrate these health principles into their daily lives. This methodology allowed for better understanding of the lived experiences and perspectives of the participants, providing rich information on the dynamics of health messages within the Adventist church.

By adopting an iterative and flexible approach, this qualitative method facilitated the emergence of patterns and themes, allowing a nuanced interpretation of the multifaceted relationship between faith and health practices.

Progressing through subsequent phases, particularly the examination of leadership roles represented by pastors and health leaders, these foundational insights from the semi structured interviews will serve as a basis for understanding how health-related practices are influenced and shaped within the Adventist context.

#### 4.1.1 Pilot Study

The pilot study was introduced with the primary objective of gathering feedback and evaluating the effectiveness of the interview process within the larger research study. Its main purpose was to thoroughly test and assess various aspects of the interview, including its structure, content, and practical considerations such as the length of the interview and the comfort of recording. To achieve this, a total of two

participants were carefully recruited for the pilot study, ensuring that their valuable insights and perspectives would contribute to refining and enhancing the subsequent interviews. The goal was to make the subsequent interviews more relevant and engaging for all participants involved, thereby maximising the overall quality and impact of the research study.

While the responses from the participants in the pilot study were not included in the final sample for analysis, their contribution, as found in other pilot studies (Majid et al., 2017) played a significant role in enhancing the overall quality and effectiveness of the study. Participants in the pilot study were actively engaged in providing feedback on their experience with the interview process. This feedback was instrumental in several important aspects of the study design.

Firstly, participants shared their perspectives on whether the interview helped to clarify their own conceptualization of the research topic. This valuable insight provided an opportunity to assess the interview's effectiveness in eliciting meaningful and in-depth responses from participants, allowing for potential refinements to be made to the interview structure and content (Malmqvist et al., 2019; Van Teijlingen & Hundley, 2001)

Secondly, participants expressed their opinions regarding the length of the interviews and their comfort with being recorded. This feedback shed light on the practical considerations that influenced the participants' engagement and cooperation during the interview process (Morin, 2013). Understanding the participants' comfort

level with the duration of the interviews and the recording aspect was vital in ensuring a positive and conducive research environment, ultimately enhancing the quality of the data obtained.

Furthermore, participants had the opportunity to voice any concerns or reservations regarding specific interview questions. This aspect was invaluable in identifying potential areas of improvement, such as questions that may have been unclear or that participants found less relevant (Majid et al., 2017; Malmqvist et al., 2019; Morin, 2013; Whitt-Glover et al., 2008). By addressing these concerns, the subsequent interviews could be refined to ensure greater relevance and participant engagement.

#### 4.1.2 Sampling

A purposive sample of Adventist population was selected to gain the perspectives of both church leaders and laity. Thus, the sample included pastors, health leaders, and other lay members. The sample criteria included members of the Adventist church, 18 years or older, able to speak and understand English, and residing in England or Wales. The exclusion criteria consisted of those aged 17 years and under, inability to speak or understand English, and not residing in England or Wales. Recruitment was halted when data saturation was achieved, in other words, the process of data collection, data review, and analysis continued until no new findings addressing the research questions is discovered (Oppong, 2013; Saunders et al., 2018).

### 4.1.3 Recruitment

The sample was recruited through emails and direct contact with pastors, health leaders, and general members, expanding the purposive sample by snowballing. Information about the study and how participants could take part was sent to all churches within the South (SEC) and North England Conferences (NEC) and the Welsh Mission. Participants received study information by way of church websites including Facebook platform and notice boards. Announcements about the study were also made during church services, and the researcher was invited to talk about the study at church board meetings.

### 4.1.4 Data Collection

Those who responded to recruitment efforts received a one-page sheet with information on the purpose of the study along with the consent form to be completed before the interview. Interviews were scheduled in advance at a designated time, after the participant returned their signed consent form.

The interviews occurred on video communication platforms and telephone, with only two face-to-face interviews due to Covid-19 restrictions. The two face-to-face interviews took place at the church building where participants attend services. The Otter.ai software was used to audio record the interviews and transcribe them verbatim, maintaining the anonymity of participants. A line-by-line check was then



done to ensure accuracy with the recordings. Participants agreed to an audio recording of the interview with the assurance that all data would be stored in a password-secured and further encrypted code on the University's one-drive system.

Semi structured interviews were conducted using open-ended questions about religious beliefs and PA with some variations depending on the role the participant held in the church (i.e., pastor, health leader, or other members). These questions were determined based on the purpose and the scope of the study and the phenomenon that was explored.

Because the research included human participants, the relevant and appropriate approval was acquired from the Research Ethics Committee at Staffordshire University prior to the commencement of the interviews. The following six topics were utilized in the one-to-one interviews:

1. Can you describe how you came to be an Adventist, how long have you been an Adventist? And what attracted you to the Adventistism?
2. How physically active are you and how often do you engage in PA?
3. What importance does your religious beliefs have in your daily life and can you describe the method(s) of religious practice you engage in as an Adventist?
4. What aspects of your religious beliefs influence your PA habit? What does PA mean to you?

5. What is the general health promotion message(s) presented in the church and how is health promotion done in the church?
6. What is your understanding of the text [1Corinthians 6:19] in the context of PA?

The semi -structured format for the interview allowed follow-up prompts to prompt participants to talk openly about the subject, and go into further detail that enabled thick description (DeJonckheere & Vaughn, 2019). Interviews lasted approximately 30-40 minutes.

#### 4.1.5 Trustworthiness

With any qualitative study, strategies for insuring trustworthiness of data collected and analysis completed are essential. For this study, the investigator collecting the data, being himself an Adventist, used bracketing to reflect on potential bias or contributions to his own religious identity. This was done by keeping a reflective diary and having discussions with mentors about the insights gained from the interviews. It is also recognised, however, that the researcher's immersion within a culture can also prove vastly beneficial in harnessing knowledge of the studied culture (Stahl & King, 2020).

#### 4.1.6 Results

The sample comprised of 27 participants consisted of pastors ( $n=7$ ), health leaders ( $n=6$ ), and other members ( $n=14$ ) from 19 churches across in England and Wales. There were more female participants ( $n=17$ ) than there were males ( $n=10$ ). The mean age of the 27 participants was 48.46 (SD=10.48). All participants were baptised members of the Adventist, with over 65% reported to be at least second-generation SDA.

Table 3 shows that more than 55% of the participants in this study were black, 22.22% were white, Asian, and mixed were equal numerically with 11.11% for both ethnicities within the study. In addition, most of the participants (40.74%) are members of churches within the Welsh Mission followed by the NEC (33.33%) and the SEC (22.22%). Pastors (25.93%) and health leaders (22.22%) together made up just under 49% of the participants, while 51.85% were other members. Of the 7 pastors, two were females and among the 6 health leaders, there was 1 male. Evidently, there were more female health leaders than there were males in contrast to the pastors where there were more males than females. There were also demographic distinctions among the other members who participated ( $n=14$ ), there were fewer men ( $n=4$ ) than women ( $n=10$ ).

Figure 1 also showed the number of participants who were at least second-generation Adventists, categorised as generational Adventists and those who joined the

Adventist church later in life. There were 18 participants who were at least second-generation Adventist, and the remaining 9 participants joined the Adventist later in life.

Of the total number of participants in the study, 3.70% were from the BUC, 22.22% from the SEC, 33.33% from the NEC and 40.74% from the Welsh Mission (see table 3 for sample characteristics).

Those who responded with an interest in participating in the interviews were each sent both an information sheet which had further information about the study and a consent form which they signed prior to the commencement of the interview.

Table 3 Sample characteristics

	Number	Percentage %
<b>Gender</b>		
Male	10	37.4
Female	17	62.96
<b>Age (years)</b>		
18-23		
24-29	2	7.41
30-35	2	7.41
36-41	3	11.11
42-47	4	14.81
48-53	5	18.52
54-59	6	22.22
60-65	4	14.81
<b>Ethnicity</b>		
Asian	3	11.0
Black	15	55.56
Mixed	3	11.11
White	6	22.22
<b>Church Role</b>		
Pastor	7	25.0
Health Leader	6	22.22
Other Church Members	14	51.85
<b>Adventist History</b>		
Born into an Adventist Family	18	66.67
Not born in the Adventist Family	9	33.33
<b>Church Conferences</b>		
British Union Conference		
North-England Conference	1	3.70
South-East Conference	9	33.33
Welsh Mission	6	22.22
	11	40.74

#### 4.1.7 Data Analysis

Thematic analysis (TA) is an iterative process of revisiting the data multiple times, making comparisons to nullify or validate initial codes and themes within the data set (Braun & Clarke, 2012; Kiger & Varpio, 2020; Vaismoradi et al., 2013). Saturation of the data, which is the point at which new information cannot be observed within the data following this iterative process, was achieved (Braun & Clarke, 2021; Saunders et al., 2018). However, the concept of saturation and how this is arrived at in qualitative research, even in this thematic analysis study, be it theoretical, data, thematic, or meaning, is not without its complexities (Sebele-Mpofu, 2020), and continues to be the subject of debate among qualitative researchers.

In this study, the concept of saturation was achieved through a rigorous process of iterative analysis. The data was revisited multiple times, allowing for comparisons to be made and initial codes and themes to be validated. This approach aligns with the recommendations of both Vaismoradi et al. (2013) and Braun & Clarke (2021), who emphasise the importance of iterative analysis in achieving saturation in thematic analysis (Braun & Clarke, 2021; Vaismoradi et al., 2013).

Furthermore, the use of detailed documentation throughout the analysis process enhanced the trustworthiness and transparency of the findings (Nowell et al., 2017; O’Kane et al., 2021). This approach allowed for the identification of any potential biases or assumptions that may have influenced the interpretation of the data. By adhering to

these rigorous methodological practices, the validity and reliability of the study findings were strengthened, contributing to the overall rigor of the qualitative research process.

There are notable dilemmas as a result that researchers may encounter when addressing the issue of saturation and how it is arrived at (Sebele-Mpofu, 2020). Despite this, there is very little literature that explains its conceptualization and usage (Saunders et al., 2018). Additionally, because of the iterative nature and coding that takes place in the processing of the data, I maintained a continuous awareness of the data for any new insights emerging during coding. This is also consistent with the definition of saturation (Hennink et al., 2019) which looks beyond the data collection point to where no additional codes come to light.

In the qualitative phase, the recorded interviews were transcribed verbatim, thereby maintaining the integrity of the data with the use of Otter.ai software and were then imported into NVivo software for thematic analysis. A six-phase approach guided the TA of the data (Braun & Clarke, 2006). These six phases that guided the TA analysis in the study included: becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining themes, and producing the report. TA is an iterative process of revisiting the data multiple times, making comparisons to nullify or validate initial codes and themes within the data set (Vaismoradi et al., 2013). Following an in-depth familiarity with the data, the interviews were then coded for initial discovery of themes, thus capturing the individual, contents, meanings, and responses contained in the data. Given that codes establish both the building blocks of

analysis (Braun & Clarke, 2012) and the structure for the development of themes (Braun & Clarke, 2020), the initial coding process commenced the categorizing of the first observation of themes from which patterns and connections within the data were discovered.

#### 4.2 Themes

A total of four themes were identified in the analysis of the data. See table 4 below.

**Table 4:** Themes and Subthemes

<b>Themes</b>	<b>Sub-Themes</b>
The health message and health promotion	Accepting the health message Over emphasis on diet Knowledge of the health message Method of health promotion
Barriers to regular PA	Pre Covid and Covid lockdown restrictions Body image Church environment relative to PA Support network
Interpreting the Adventist identity and its association with PA	PA and the Bible The Adventist advantage and longevity Community outreach The Adventist identity relative to PA Adventist's motivation toward PA
The influence of pastors and health leaders on the attitude of church members towards PA.	Leadership support and setting example. Health promotion training for pastors and health leaders Pastoral workload Pastoral health concern for the church Concerns for pastors health



## Explanation and nature of sub-themes

The sub-themes identified in this study reflect underlying aspects of the main themes rather than discrete categories with separate headings. These tacit dimensions are integral to the thematic analysis but should be understood as implicit elements within the broader themes rather than as standalone sub-sections.

### 4.2.1 Theme 1. The health message and health promotion

Participants perceived health and wellness promotion as a core belief of the Adventist church. They believed the “health message” was to be shared with the wider community and beyond, and that observing the holistic nature of the health message should be connected to scripture as well as contemporary scientific evidence.

When discussing the promotion of health within the church, participants felt that there is an overwhelming emphasis on nutrition, and while PA were also encouraged, the message was not as strong. As one informant stated:

"Individuals who present it have only taken one aspect of the health message and tend to focus only on that aspect. Okay, so rather than getting a holistic picture, what is presented is, let us say 10% of the total health message. Therefore, if you mention health within Adventism, people automatically go to food, and the rest is not mentioned." [Pastor 1]

Some members thought that health leaders should promote PA and that there is a lack of knowledge on the part of those expected to promote health. For example,

“PA is not presented full stop, it is just not presented, it is not talked about... we need a better understanding of the Adventist Health message.” [Lay member 1 & Pastor 2]

This overemphasis on nutrition and a lack of emphasis on PA limits the knowledge, importance, and acceptance of the health message which are said to be necessary factors if recommended behaviours are to be practiced (McKenzie et al., 2015a).

Some pastors felt that the role of the health leader would be more suitable for someone who is a health professional or has some health-related training and possesses higher credibility when responding to health-related matters in the church.

“I think it should be included in the guidelines for choosing a volunteer health leader that it should be someone who already has a medical background.”

[Pastor 3]

These proposed criteria were only echoed by some of the leaders of the church, while several lay members expressed concerns regarding the lack of health promotion training at the seminary level for pastors.

When participants spoke of their acceptance of the health message, they spoke in the context of applying the church’s recommended health principles in their day-to-day lives. For example, one person said:

“To be an Adventist means that we embrace the health principles God has designed for us.” [Lay member 2]

However, members felt discouraged because of the pastors' example, or lack of. In other words they do not see their leaders following the recommendations of the health message.

“Some pastors don't even practice, the health message... You can see by their lifestyles their conversations, the foods they eat when we are at the Pastors gathering, most are quite overweight, they are not into the health message.” [Lay member 3]

Although most health leaders said they had a regular PA regimen and recognised the importance of PA , they did not feel supported enough to provide PA programs within the church.

“I started doing exercise classes for the over 60s, but then I opened it for everybody else, one pastors came to see how it was getting on... So, I did not feel that we were supported, so it folded...It is about what help you get from your leaders and church family.” [Health leader 1]

Having the buy-in of the pastor is an essential element for successful intervention programs within the church (Moore et al., 2024). Furthermore, studies have also shown that pastor involvement is even more important for long-term success of health promotion initiatives within the church (Austin & Claiborne, 2011; Peterson et al., 2002).

Most leaders and members said that a better understanding of the health message was needed, because the importance of PA is embedded in its content. In fact, participants compared the church with the emphasis of the secular world on PA and

exercise.

“The world should not be in front of us, we should be leading it, especially in terms of health and fitness and how it affects us.” [Pastor 4]

Taking this into account, the participants felt that the church could and should do more on health messages and health promotion, with particular focus on the topic of PA. They also believed that the way health promotion is done needed to change and stated the desire for more creative methods of health promotion.

“We need to rethink the way we do health programs; we need to rethink them in a way that makes them more attractive, more modern, and more purposeful.”

[Health leader 2]

Some pastors, however, did not feel they had the credibility needed to effectively conduct health promotion initiatives with their members because they found it difficult to promote something that was not part of their lifestyle. However, lay members also felt that because the health message is central to evangelism, health promotion should be part of the training pastors receive at the seminary. In fact one minister said that the principle of PA was a crucial factor in her ministry.

“I would say you know that it's reflected in how I preach, what I talk about... what I teach is right there up there as well about health...following the health message and trying to be the best that you can be in a sinful world.” [Pastor 4]

This may also address the way health promotion is done in the church and the success of such programs and increase the level of self-efficacy among pastors.

However, one participant reflected that the current malaise in attitude of the church towards PA and indeed the health message is a matter that is unique to Adventist church in general.

“I think it is a general attitude amongst Adventists, we know it is important, but we don't always live it out”. [Lay member 4]

In spite of this however, accountability was directed toward the leaders of the church, leaders such as the pastor who is the ultimate leader and those in other leadership roles such as health leaders. It was felt that the church's ability to uphold the health teachings is largely dependent on the administrative leadership at the conference level, as they are the ones who initiate the focus of the church and subsequently the direction of the church and its programs.

“ I think it all depends on who the leadership is at that time...okay, if our leaders in our conference, aren't believing and practising the health message, and I think over the last couple of administrations they haven't...this last administration, yes, they weren't really into health message.” [Pastor 5]

Participants shared that there may be a pressing need to improve the comprehension and application of the health message within the Adventist church, particularly at the conference level.

“We need to have a better understanding of the Adventists' health message is all about... and how big overall PA plays within the idea that I am an Adventist...I

love my health and the health message...and PA is there and I'm not doing it".

[Lay member 5]

The conceptualisation of the health message was one of great import to the participants due in part to what they believe is an all-encompassing message of how to glorify God in their bodies. One health leader suggested that for the health message and subsequent health promotion to be effective, one must realise that the health teachings are not as limited as is portrayed.

"The health message is a lot broader, and I do think we need to make changes".

[Health leader 3]

The participant felt that the most significant change needed is the mindset toward PA and a better understanding of the health message of the church which is intrinsically linked to the doctrines of the church.

During the semi-structured interview, participants shared their perspectives on the significance of PA in relation to religious and spiritual well-being within the context of the Adventist church. One participant expressed the belief that PA should be promoted with equal emphasis alongside religious practices due to the profound interconnection between the body, mind, and spirit. This notion aligns with EGW's understanding of the concept that when one aspect that makes up the body is affected, the overall well-being of an individual is compromised (White, 1900).

"I just believe, PA is as important as my religious beliefs. So, promote it in an equal way to the spiritual because once again, there is a very tight connection

between the body mind and spirit. So when one is being affected, everything else, suffers". [Lay member 6]

The participant's statement highlights the recognition of the intricate relationship between physical and religio-spiritual dimensions of human existence. It recognises the importance of acknowledging the impact of physical health on religious and or spiritual well-being and vice versa.

Moreover, the participant's viewpoint emphasises the need for an integrative approach that embraces the interconnectedness of body, mind, and spirit within religious communities such as the Adventist church.

One participant expressed the belief that the prevailing methods employed in health promotion may not align with the contemporary significance and value placed on them by society. The participant suggested that the existing approach may be inadequate or misguided, thereby warranting re-evaluation and potential revision.

"Something that is so important, so valued by the by the world, you know, healthy living, exercise activities etc... I think that we are doing it in the wrong way". [Pastor 5]

The participant's statement signifies their perception of a potential disparity between the current practices surrounding healthy living and PA and the increasing recognition of their importance in modern society.

Overall, the participant's statement draws attention to the need for reassessment and potential reformulation of approaches to health promotion of PA,

considering its significance and value not just in the Adventist church but in contemporary society.

Another participant expressed the perspective that there is nothing inherently flawed about the Adventist's beliefs concerning health and PA . Rather, the participant suggested that the issue lies in the church's ability to effectively promote and advocate for PA within its setting.

'There's nothing wrong with the beliefs of the Adventist related to health, PA , etc. We just don't know how to present it". [Pastor 6]

This viewpoint accentuates the participant's belief in the validity and importance of the Adventist's principles related to PA and overall well-being. However, they contend that the challenge lies in the church's ability to effectively convey and encourage these principles among its members. The statement highlights the need for improved strategies and approaches to promote PA within the Adventist church.

Such an outlook draws attention to the importance of developing tailored and effective promotion strategies that resonate with individuals within the Adventist church. By improving the presentation and communication of the beliefs and principles related to PA, the participant suggests that greater adherence and participation in PA can be achieved within the church context.

#### 4.2.1.1 Discussion Summary of Theme 1



An understanding of the health message within the Adventist church is necessary, particularly at the conference level according to participants in the study. The current study therefore suggests a lack of visible demonstration of health promotion as a priority at the conference level, and even if such prioritisation exists, it appears to be inadequately disseminated to local pastors and churches. This highlights a gap in applied knowledge, which is essential for facilitating the integration of PA into religious beliefs and practices at both individual and collective levels (Majee et al., 2022; Wells et al., 2022a).

The existing strategic approaches employed by the church to sustain health promotion seem to be limited to a few acronyms, such as the C.R.E.A.T.I.O.N. principle (Choice, Rest, Environment, Activity, Trust in God, Interpersonal relationships, Outlook, and Nutrition) (Gadd & Tryon, 2016; Nesbit, 2022) or the N.E.W.S.T.A.R.T principle (Nutrition, Exercise, Water, Sunlight, Temperance, Air, Rest, and Trust in God) (Abdala et al., 2021; Sanchez et al., 2019). However, the health message encompasses far more than these abbreviated representations, requiring a deeper and more invested understanding.

However, a better understanding and application of the health message involves going beyond simplistic acronyms and diving into the complexities and nuances of health promotion, including the integration of PA within religious beliefs and practices. Further research and concerted efforts are warranted to bridge the gap between

theoretical knowledge and practical implementation, ultimately fostering a more implicit and effective approach to health promotion within the Adventist church.

EGW in her writings reiterated that whatever affects the body also affects the mind and spirit (White, 1900, 1923). This perspective, echoed by most of the participants, aligns with the growing body of scientific literature that emphasises the holistic nature of human health (Barragan-Jason et al., 2023; Zinsstag et al., 2023), which includes not only spiritual and mental aspects, but also physical vitality. This perspective challenges the notion that religious practices should take precedence over physical well-being. Instead, it advocates for a balanced approach that equally values and promotes both religious tenets and physical aspects of health (Koenig et al., 2012; Noh et al., 2022).

The participants' views on this theme implied that there is a need for a critical examination of existing strategies to ensure relevance and effectiveness in addressing the evolving health needs and expectations of individuals in the Adventist church. This highlights the participants' critical stance on the prevailing approach, suggesting that it may not fully meet the demands and expectations of the present context. This perspective aligns with the call for ongoing research and innovation in the field of health promotion, as scholars and practitioners seek to optimise strategies and interventions to better synchronise with evolving societal priorities and emerging evidence (Hatzikiriakidis et al., 2023; Remm et al., 2023). This perspective contributes to the scholarly discourse surrounding the optimisation of health promotion strategies

(Thomson, 2023; Vella et al., 2023) to better meet the needs and expectations of individuals in the current era. This suggests that the current methods employed may not be sufficiently engaging or persuasive, resulting in limited or unmeasured success in fostering a culture of PA within the church community.

#### 4.2.2 Theme 2. Barriers to regular PA

Many participants referred to the Covid-19 pandemic as one of the biggest setbacks to engaging in any form of PA. Some reflected on how active they were before the pandemic but struggled to remain physically active during the pandemic because of national Covid-19 restrictions.

“Before COVID I was very active... but I didn't exercise during the COVID lockdown for a year being in the house, I didn't exercise, during the time I was working at home.” [Lay member 6]

Others explained that they took online exercise classes whenever they could, stating that online exercise classes motivated them to be physically active at home. Still, participants went on to say that doing such activities at home was challenging because the family were also at home and needed attention.

Participants also talked about the difficulty in establishing a regular PA routine while working from home and caring for a family. Some found injuries or long-term chronic illnesses restricted their PA.

“I wish I was able to do more...You know, my kids keep telling me you're lazy you're not going out enough, but physically, I feel I can't...I've got a few health problems.” [Lay members 7 & 9]

One health leader considered PA to be mindless and thus would only engage if there is no other purpose other than just to be physically active. However, the majority indicated that they wanted to do more than they were currently doing.

“ I needed to make changes... so I started doing online exercise classes.” [Lay member 7]

Online exercise classes gained popularity during the pandemic (Taylor et al., 2021), due to the Covid-19 restricting outdoor PA. However, the church did not appear to use this online means to promote PA adequately as no one referred to such opportunity associated with the church.

Conversely, whilst most participants talked about the church’s role in addressing the lack of support from leaders and resources to encourage members to engage in PA, few felt that it is rather a matter of personal responsibility and not entirely the church’s full duty to ensure one engages adequately in PA.

“I think, but it's actually not the church's responsibility, it's not fully the church's responsibility to make me physically active, ultimately it's my responsibility.” [Lay member 4]

However, lay members were generally disappointed with the lack of organisational provision to facilitate any desire to be more physically active. One member stated that:

“There are people who you could go to one on one if you wanted, but if you are looking for the church to provide a PA program or something you can go to, it is not there.” [Lay member 8]

While some participants said they had joined a gym but found it difficult to be consistent, others said that they had often thought about joining their local gym but could not pay the cost of a gym membership and did not feel comfortable exercising in that environment either.

“I have tried going to the gym, I started a few times, but I was not consistent and that's the truth... I think it started with the expensive gym membership and because I didn't feel comfortable going back to the gym.” [Lay member 6]

In addition, most participants voiced their hesitancy in entering a gym facility not least because of the environment that often features music that is incongruent with their Christian values and beliefs, and the type of clothing typically worn by those who frequent such facilities.

Additionally, some participants mentioned their interest in incorporating more strength and conditioning exercises into their routine, indicating a specific focus on enhancing muscular strength and overall conditioning. These insights highlight the

participant's aspirations and motivations regarding their PA engagement, providing valuable context for their perspectives on exercise.

“I want to do more...it's just getting the balance...I probably would like to do a bit more strength and conditioning”. [Lay Member 9]

This signifies the participant's interest in enhancing muscular strength, endurance, and overall physical performance. By expressing a specific preference for strength and conditioning activities, the participant demonstrates an intention to target specific fitness goals and further develop their physical capabilities.

These statements collectively highlight the participant's proactive attitude towards their exercise routine. Thereby exhibiting a willingness to prioritise their physical well-being and actively seek ways to improve and optimise their fitness regimen. This demonstrates a sense of personal agency and a commitment to self-improvement through PA.

Most participants who stated that they have a regular PA regimen highlighted that neither the church nor anyone else encourages or influences their decision to prioritize PA. Rather, they asserted that their engagement in PA is driven by personal volition, serving as an intrinsic pathway toward self-improvement.

“I realised I needed to do something for me, so that's when I decided to start my PA journey, you know, change my lifestyle...it's personal to me, not the church.”

[Lay member 3]

This perspective reinforces the participant's self-determined motivation and

autonomy in prioritising their physical well-being, distinct from external influences or communal expectations.

“It's not encouraged by the church is not encouraged by anybody, it's, it's totally my path, something that I must do for myself”. [Lay member 10]

In an honest reflection, the participant even remarked upon the physical appearance of some pastors they have encountered, suggesting that their size did not provide an inspiring role model for physical fitness.

“I've never been encouraged by a church member or anybody to be physically active... if I'm totally honest, when I looked at the size of some of the pastors that I've seen, there is no encouragement, right, to be physically active”. [Lay members 10 & 11]

This statement emphasises the absence of encouragement and role modelling for PA within the church context, potentially contributing to the perception that physical fitness is not a valued aspect of the church. This raises important considerations regarding the role of the church in promoting and supporting PA among its members.

It is crucial for church leaders and members to recognise the potential impact of their actions and attitudes toward PA. By fostering an environment that actively promotes and encourages PA, the church can align its teachings with practical demonstrations, providing support and motivation for individuals to prioritise their physical health (Middleton, 2023). This may involve initiatives such as organized exercise

programs, educational workshops on the benefits of PA, and role modelling by leaders and influential members who prioritise and embody an active lifestyle.

While acknowledging the presence of individuals who may be willing to offer personal guidance on PA, the participant noted the absence of organised services or programs provided by the church specifically dedicated to promoting PA. This emphasises the participant's perception that the church does not currently offer accessible avenue for individuals seeking opportunities for PA.

“There are individuals that you could go to one to one, if You wanted it, but if you are looking for the church to provide a service or something for PA that you can go to, it isn't really there, it's not there”. [Lay member 12]

The participant's observation the need to consider the role of the church in providing support and resources for PA.

By recognising the role of the church as a catalyst for positive change in individuals' physical health, the church can work together to bridge the gap between the desire for structured PA services and the current offerings within the church context (Dejean et al., 2024). Addressing this gap requires a collective effort to recognise the importance of physical well-being and to establish initiatives that support and promote regular PA within the Adventist church.

The church appears not to be without certain stigma attached to the organisation. Body image particularly among the women and the leaders within the church served as a barrier to effective health promotion of PA. One participant



expressed the need to address the issue of PA within the church due to personal changes in body shape. Drawing attention to the prevalence of overweight individuals within the church, the participant highlights the significance of this issue in relation to the overall health and well-being of congregants.

“Now it's time to address it because my body's changed shape...there are a lot of overweight people in the church”. [Lay member 12]

The participant's observation amplifies the importance of recognising and addressing the challenges associated with weight management and physical fitness within the church. The presence of a considerable number of overweight individuals suggests a potential disparity between the health practices encouraged by the church and the current health status of its members. This disconnect may call for a more proactive approach to promote PA, healthy lifestyle choices, and weight management within the church context.

Peer support networks and mentorship programs can also play a vital role in providing guidance, accountability, and emotional support to individuals striving to make positive changes in their physical health (Lowy et al., 2021). The participant's remark, however, draws attention to the need for the church to address the issue of PA and weight management. The presence of overweight individuals within the church intensifies the importance of implementing comprehensive programs and initiatives that promote healthy living, physical fitness, and weight management. By adopting a multifaceted approach that encompasses education, support, and a nurturing

environment, the church can play a significant role in facilitating positive changes in the physical well-being of its members (Osei-Tutu et al., 2021).

#### 4.2.2.1 Discussion Summary of Theme 2

The study reveals insights into the dynamics of church participation during the pandemic, with a notable reliance on online platforms to maintain connections and fellowship. However, despite the convenience of virtual services, a recurring theme emerged regarding the absence of organised online programs to encourage PA among church members. These levels of support, access to facilities, and supportive relationships are among the essential components that foster church health promotion programmes (O'Leary et al., 2022; Peterson et al., 2002; VanderWeele, 2020).

Within this context, diverse perspectives were shared regarding the effectiveness of church-led initiatives to promote PA. Although some participants expressed satisfaction, a significant number of pastors voiced frustrations. Their concerns centred around a perceived lack of emphasis on PA and limited content dedicated to its promotion within the church setting. This highlights potential challenges in aligning religious practices with health promotion, specifically in the context of physical well-being (Hamdonah, 2022).

Interestingly, the study emphasises the critical role of pastors in shaping the church's approach to PA. Many health leaders noted a lack of support and participation

from pastors in the proposed PA intervention programmes. This suggests a disconnect between leadership engagement and the implementation of health initiatives, raising questions about collaboration and communication channels between health leaders and pastors (Wells et al., 2022a).

The participants identified several barriers to participating in regular PA, emphasising the multifaceted nature of the challenges encountered by the Adventist church. Issues such as the secular environment at local gyms, time constraints, and the absence of structured PA services within the church community were identified as significant hindrances. These barriers contribute to a complex landscape that requires nuanced strategies to address the diverse needs and preferences of congregants (Alexopoulos et al., 2023).

In particular, the study focusses on individual initiatives to maintain PA, particularly within the home setting. The use of DVD programs for guided PA sessions emerged as a prevalent practice. This signifies a proactive approach by participants to incorporate PA into their daily routines, emphasising the importance of accessible and user-friendly resources to support individual engagement in physical activities (Strongman et al., 2022).

The participants also highlighted the importance of balance and expressed a desire to expand their PA routines. Their proactive attitudes towards PA, coupled with an awareness of the need for a balanced approach, provide valuable information on the motivations and preferences of individuals within the church community regarding PA

(Brewer et al., 2022). However, a significant concern raised by more than 90% of the participants relates to the perceived lack of emphasis on PA within the church. This sentiment is reinforced by a participant's personal perspective, emphasising the self-driven nature of engagement in PA. This raises important questions about the alignment between the church's teachings on holistic well-being and the practical emphasis on physical fitness within the community (Harmon et al., 2022).

Moreover, participants shared observations regarding the church's role in actively encouraging and supporting PA. The absence of positive role models and a lack of active motivation or support from church members were observed, creating a potential barrier to behaviour change and the adoption of an active lifestyle. This observation prompts a critical examination of the disconnect between preached values and demonstrated behaviours within the church context (Strayhorn et al., 2022).

In conclusion, the study sheds light on the complex interplay between online church services, individual PA initiatives, and the role of the church in actively promoting physical well-being. The findings bolsters the importance of addressing barriers, improving communication channels between health leaders and pastors, and fostering a supportive church environment that aligns with the holistic well-being of its members (Randall et al., 2023a).

### 4.2.3 Theme 3. Interpreting the Adventist identity and Its association with PA

Several lay members believed that being Adventist was associated with being physically active and felt that the true definition of Adventism embodied such behaviour. Equally, pastors and health leaders believed the health message was part of the identity of the Adventist church. However, one pastor said that the church needed to be reminded of what being an Adventist really is and how the health message fits into the identity of Adventism.

“This boils down to the fundamental beliefs of the Adventist church which one of reflects on the holistic approach to life or to health whereby we focus on the spiritual aspect and the physical aspect.” [Pastor 5]

All participants explained that the Bible speaks unequivocally about health, stating that it is not a singular construct that looks only at nutrition but one that includes physical, mental, and spiritual, all of which affect the body, and thus acknowledge PA as part of the stewardship of the body.

'I think we often need to be reminded about our identifying marks as Adventists, that the message of health is at the heart of who we are and includes our physical and mental health... It is quite clear from the Bible that health is not only influenced by what you eat, it includes many different factors, one of them is certainly exercise.' [Pastor 7]

Conversely, one health leader dismissed the notion that by being an Adventist, one was predisposed to being physically active, thereby refuting the suggestion that there is an advantage by being an Adventist.

“I don't think the advantage is just because you're an Adventist. I think there's an advantage to being physically active, whether you're Christian or not”. [Health leader 5]

Views on the association between Adventism and PA were diverse. Some agreed that this indicates a need for better understanding of what it means to be an Adventist.

One participant emphasised the importance of holistic health within the context of being an Adventist. Acknowledging the principle of holistic health as a fundamental aspect of their faith, the participant highlighted the importance of taking personal health and PA seriously. According to their perspective, optimal well-being aligns with the intended approach that God designed for everyone.

'Part of being an Adventist is holistic health, and you will take your health and PA seriously, because we are looking at the optimal sort of modality that God intended for you'. [Health leader 5]

From the participant's point of view, prioritising PA and health aligns with the holistic principles embraced by Adventists. By engaging in regular PA and caring for one's physical well-being, individuals can strive towards the intended state of well-being set forth by God. This perspective suggests that adopting a proactive approach to PA is

not only a personal responsibility but also a manifestation of faith and obedience to God's intentions for human flourishing.

However, one participant expressed frustration with the current state of affairs; the participant highlighted the urgent need for the church to reevaluate its thinking and take proactive measures to promote PA. Specifically, the participant emphasised the need to break away from the traditional practise of sitting during significant moments, such as praise and worship services. A continual lament persisted on the lack of initiative among congregants to stand up and engage in physical movement during these times, observing a prevalent tendency for individuals to remain passive.

'This is where the church really needs to change its thinking and not sit still for designated times, such as during the praise and worship service. This is where people can stand up, but they cannot get people to stand up for singing or for praying. You will hear people in the pews moaning during songs service. So in general the church really needs to change its thinking in meetings, during services, during presentations to become more active. So the church really needs to have a paradigm shift to become more supportive for physical active and become more aware". [Health leader 6]

Furthermore, the participant drew attention to audible expressions of discomfort and disinterest that permeate the congregation during song services, indicating a reluctance to actively participate.

To address this issue comprehensively, the participant advocated for a fundamental change in the mindset of the church during meetings, services, and presentations, urging a paradigm shift toward creating a more supportive and physically active environment. Recognising the importance of this shift, they stressed the need for the church to become more aware and intentional in promoting PA among its members.

Further discontent continued when a participant expressed his intention to address and discuss the global health policy of the Adventist church, highlighting his motivation to provide constructive criticism and encouragement rather than mere criticism. They likened the health message of the church to a right arm, symbolizing its importance and significance. However, one health leader described the current state of the health message as an amputated limb, indicating their belief that it has been neglected or disregarded.

'This is why I have to criticise, or not criticise, well let's say encouraged or challenged the global health policy of the Adventist, because this right arm, which is the health message, has been amputated.' [Health Leader 1]

The participant emphasised their desire to advocate for a revitalization and reevaluation of the health policy within the church, emphasising the need for multidimensional and integrated approaches to physical health and wellness.

According to one participant, it is acknowledged that God is considered Holy, and as such, if individuals desire God's presence within them, it is essential to care for their physical bodies. The participant emphasises that our bodies are a gift, regardless of their



current condition, bestowed on us by God. Consequently, as stewards of these gifts, it is our responsibility to ensure their well-being.

'We know that God is holy. So, if we want God to reside in us, we need to be looking after the vessel. Our bodies are a gift whatever condition they're a gift from him and we are stewards we are stewards of what he's given us, so we are to look after them, and exercise is one way to look after my body. I take care of my house because I wanted it to last". [Lay member 13]

Engaging in PA is identified as one approach to fulfilling this duty of caring for the body. The participant draws a parallel between tending to their physical body and maintaining their house, expressing the desire for both to endure, and be preserved.

Furthermore, emphasis was placed on the concept of stewardship and its relevance to PA. According to the beliefs of one participant, humans are considered stewards of the Earth and their own bodies. They expressed the view that physical exercise is fundamental in fulfilling this role of stewardship. Drawing from biblical references, the participant highlighted the importance of PA by referencing the biblical principle that 'if a man doesn't work, he should not eat'.

'We call ourselves stewards, as someone in charge of this earth, and we are stewards of our bodies. We believe that physical exercise is fundamental because God gave man dominion over the earth right. And we do believe that if a man doesn't work, he should not eat. That is what the Bible says right, that shows you the importance of activity. ' [Lay member 14]

These insights suggest that PA is considered a significant aspect of stewardship, aligning with the belief that individuals should responsibly care for their bodies as a gift from God. In fact, most of the participants acknowledged that caring for the physical body through PA connects them to God and is a link that further strengthens their relationship with God.

“Exercise is a way of connecting my God...I think people don't see the connection as well as lack of motivation... the link between us being Adventists and PA which is part of health is extremely important...because God wants us to be healthy, spiritually, physically and emotionally”. [Pastor 1]

The participant's statement reflects their perspective of the intertwined nature of physical and religio-spiritual well-being. They perceive PA as a pathway to strengthening their connection with God, viewing it as a means of honouring the body as a divine gift and fulfilling their role as stewards of their physical body. When engaged in regular PA, they recognise the opportunity to nurture not only their physical health, but also their spiritual and emotional well-being. The participant's belief in the importance of health in all its dimensions aligns with the principles of their Adventist religion, which emphasise the holistic approach to living a fulfilling and purposeful life.

Beyond the personal connection and growth as an Adventist Christian, light was shed on the connection with the wider community while fulfilling the commission that the

church believes it was called to do, which is to continue the healing and teaching ministry of Jesus Christ.

'If we have something regularly that looks at PA and exercise, maybe we can actually look at other businesses in the community where it might not have been as easy to speak to them about the Bible, but because they see us doing like a walking group, they may say, let me join them, then you actually get on the same level as these people and it's easier for you to actually speak to them about things that are also very important, such as the coming of Jesus.' [Lay member 1]

The participant emphasised the potential benefits of incorporating regular PA initiatives into the church community, not only to promote physical health, but also to create opportunities to connect with people who may have previously been less receptive to religious discourse. By organising activities such as walking groups or PA classes, the church can actively engage with the broader community, attracting the interest and participation of individuals who may have otherwise remained disengaged.

In addition to promoting PA, the participant highlights the importance of the church's holistic approach to well-being, which includes spiritual, physical, and emotional dimensions. The belief that God desires his followers to be healthy in all aspects of life accentuates the importance of PA within the Adventist faith.

#### 4.2.3.1 Discussion Summary of Theme 3

The participants in our study shared diverse perspectives on the relationship between being an Adventist and participating in PA. Some participants perceived PA as a means of community participation or serving others, suggesting that implementing PA could reduce health disparities in their community, as highlighted in previous studies (Abohashem et al., 2024; DiPietro et al., 2020; Franklin et al., 2023) and support the identity of the Adventist church. This emphasises the potential for PA to serve not only individual well-being, but also broader community impact within the Adventist context.

The concept of holistic health within the Adventist tradition emerged as a central theme in the study. Participants emphasised the need for a detailed approach to well-being, incorporating the physical, mental, and spiritual dimensions of health. This perspective reinforces the belief that optimal health is achieved when all aspects of an individual's life are nurtured and balanced (Edelman & Kudzma, 2021; Mangarule & Joshi, 2022) . By recognising the interconnectedness of these dimensions, participants highlighted the importance of embracing PA as an integral part of living out Adventist principles and values.

However, despite the recognition of the importance of PA within the Adventist faith, participants observed a perceived lack of awareness and motivation among individuals about the sacred significance of PA. This observation suggests a potential gap in understanding within the Adventist church about the holistic nature of health and the

role of PA within its religious framework. In general, participants felt that there was a need for action, urging fellow church members to recognise the inherent link between their Adventist faith and beliefs and their responsibility to maintain and enhance their overall well-being. This call for a united shift in attitude toward PA reflects the findings of previous studies that showed that effective sources of support within a religious environment can yield the desired outcome among congregants (Geller et al., 2019; Harmon et al., 2022)

Integrating physical, spiritual and emotional health was considered vital to embodying the teachings and values of Adventist religious faith among participants. Therefore, by embracing a better understanding of health and promoting PA as an integral part of their personal and religious journey, participants may experience the interconnectedness of the body, mind, and soul to achieve a balanced and harmonious existence (Lee et al., 2018).

This perspective illustrates the transformative potential of incorporating PA as a religious practice within the Adventist church. By fostering a greater appreciation for the role of PA in nurturing their relationship with God and upholding the principles of stewardship, individuals can harmonise their beliefs with their actions, cultivating a lifestyle that embraces the integration of faith and holistic well-being (Strayhorn et al., 2022). In addition, participants proposed that shared physical activities could serve as a common ground, allowing church members to connect with community members on a personal level and establish a sense of connection. Through these connections,

participants believed that it would become easier to address and discuss significant spiritual topics, such as the teachings of the Bible (Hardison-Moody & Yao, 2019; Haughton et al., 2020b).

In conclusion, actively prioritising PA and viewing it as an integral component of stewardship responsibility allows church members to connect their actions with their religious beliefs. This alignment not only benefits individuals on a personal level but also serves as a powerful testament to the wider community (Haughton et al., 2020a). It demonstrates the church's commitment to promoting health and the pursuit of a balanced and fulfilling lifestyle (Randall et al., 2023a).

#### 4.2.4 Theme 4. Pastors and health leaders' influence on church members' attitudes toward PA

Although respondents acknowledged that the health message is integral to the Adventist church, several participants also spoke about the influence of leadership within their church and how an understanding of the relationship between religion and PA is largely dependent on clear leadership from pastors and health leaders. Health leaders are generally expected to conduct health promotion programmes (Makoka & West, 2022; Odukoya et al., 2023), whereas pastors have less of an expectation in that regard.

“It's always finding the right leaders to promote these things and what I say to my leaders is, I'm not there to micromanage them, okay. I help empower them, I get them materials, I put them in touch with the right people.” [Pastor 5]

However, members indicated that having leaders who practise the health message and are physically active would influence the church to be more active. Additionally, pastors and health leaders worked independently of each other, and members reflected on the potential impact on the church if both leaders worked together.

“Most pastors do not even practise the health message... If both the pastor and the health leader worked together, it would be very impactful because people look to the leaders, so if the leaders work hand in hand, we could influence more people. ' [Lay member 3]

Participants shared insights into the potential benefits of fostering stronger collaboration between health leaders and pastors within the church. They highlighted that such partnerships could lead to a more robust support system for church members, encompassing both physical and religious aspects of well-being. Participants emphasised the following impacts:

“Anything that comes through the leader people will take it because people are influence by our leaders, so if the leaders are working hand in hand, the pastors

and the health leaders, working together then we might influence more people.”

[Lay member 1]

“Just seeing them working together, yes, I think would encourage a lot of people... if pastors and health leaders were working as one, then that would encourage everybody else because it will be a waterfall effect.” [Lay member 3]

Participants felt that the collaboration between pastors and health leaders has the potential to not only enhance the health and well-being of the church members but also extend its influence on a wider audience.

Alternatively, some pastors felt that due to their active lifestyle, their credibility was intact, and were actively setting good examples to their congregations, while others felt that they lacked credibility and in addition to finding it challenging, they felt it would be rather hypocritical to promote something they did not practise.

“It is very hard to promote something that you are not doing well, okay, or that you are neglecting yourself, okay, okay, because you don't have credibility.”

[Pastor 6]

One of the reasons pastors attributed the challenge of them getting involved in health promotion was because of the 24/7 workload, and in some cases experienced burnout. Pastors said they acknowledged that their lifestyle and influence within the church are impactful because of the position they occupy and recognised the need to set an example regarding physical health.



“The role of a pastor. It's not like any other job , because it's a seven day a week job. Because there's all the things going on every single day. So even though in theory, my contract states six days a week, and one day off, rarely does it work like that. Unless you It depends on what type of pastor you want to be, but it doesn't really work like that.” [Pastor 4]

All pastors and health leaders said that the church faced various challenges, one of which is physical health, especially during the Covid-19 pandemic. Pastors and health leaders agreed that, more than ever, more could and must be done to influence members' motivation to be physically active and participate in regular PA. However, a pastor spoke candidly of his position as the number one position from which a healthy lifestyle is demonstrated to his congregation.

“Every Adventist pastor should really be a health promoter of PA ...So for me, I do promote health, and I do try to live a healthy lifestyle...I think I am Chief one of the chief educators for my congregation of health because without their health, they cannot be their best, they will not be happy”. [Pastor 2]

The participant emphasises the crucial role of Adventist pastors as health promoters within their congregations. According to the participant, every Adventist pastor should embrace the responsibility of promoting health and strive to lead by example in adopting a healthy lifestyle. In doing so, pastors become influential educators, guiding, and inspiring their congregation members to prioritise their well-being.

By actively promoting health and PA, the participant aims to empower its congregation members to make informed choices about their well-being. They recognise that by nurturing their physical health, people can better serve their communities and experience a fulfilled life.

Furthermore, participants expressed their perspective on the dissemination of health messages within the Adventist church. According to one participant, it is typically the health leader who assumes full responsibility for delivering the health message.

“It's normally the health leader, takes up the full responsibility of the health message. So the health leader has the autonomy. And it's a massive task to present the health message, but that's their role.” [Pastor 1]

This finding aligns with common practises observed in the Adventist church globally, where health leaders are entrusted with the task of promoting and educating others about health-related topics (Hellman, 2022). The participant continued to emphasise the degree of autonomy granted to health leaders to carry out their responsibilities, which may contribute to the individualised messaging regarding health within the church. This autonomy suggests that health leaders within the Adventist church have the authority to determine the most effective strategies and platforms for communicating the health message. They have the freedom to tailor their approach to suit the unique needs and characteristics of their audience.

However, the autonomy granted to health leaders allows flexibility and adaptability to promote health within this religious context. However, it is important to recognise the immense task pastors and health leaders face in conveying a holistic health message that encompasses various dimensions of well-being.

Continuing reflection on the role of health leaders in the interview, a participant expressed concerns about health promotion within the Adventist church, specifically highlighting the lack of emphasis on PA. The participant's insights shed light on an important aspect that merits scholarly investigation and consideration, hence the current study. According to the participant, interactions with health leaders in various Adventist churches throughout the UK have led to the observation that there is a predominant belief, namely, that health is primarily associated with dietary choices, particularly focussing on a vegan lifestyle.

“If you go to a random church and you speak with the health leader or any church in in the UK, I will say probably eight out of 10, It will be a person who will be thinking that health is something that we do if we eat vegan food.” [Pastor 1]

This finding indicates a potential imbalance in the emphasis placed on various health promotion elements within the Adventist church, suggesting a potential underemphasis on PA.

These concerns raise significant questions regarding the comprehensiveness of the health message disseminated within the Adventist church. While the church has traditionally advocated for a vegetarian or vegan diet as part of its health message

(Douglass, 2000; Galvez, 2017; Shipton, 2016; White, 1938), it is worth recognising that a holistic approach to health includes not only dietary choices but also the promotion of regular PA. The participant's concerns may be attributed to various factors that influence the observed underemphasis on PA within the Adventist health promotion efforts.

Historical and cultural influences, as well as prevailing societal norms, might have shaped the perception that health is predominantly associated with dietary choices particularly in the Adventist church. Furthermore, limited resources, knowledge gaps, or lack of specific training among health leaders can contribute to the limited attention given to PA promotion within the church's health message.

Such concerns about the lack of emphasis on PA within the health promotion efforts of the Adventist church highlight an important area for further investigation. Recognising the diverse benefits of PA and addressing this imbalance through education, training, and resource development can enhance the generality and effectiveness of health promotion within the Adventist church, ultimately contributing to the overall well-being of its members.

One participant expressed that the promotion of health within the Adventist community predominantly rests upon individuals who espouse conservative beliefs and practices. Their understanding of health according to the participant is deeply rooted in veganism, considering it not only a dietary choice but also a pathway to heavenly salvation. The participant goes on to say that these health promoters assume the

responsibility of delivering the health message and guiding others toward healthier lifestyle. They believe that by adhering to plant-based diets and embracing health principles, individuals can better align themselves with divine intentions and fulfil their stewardship over their physical bodies.

“So, majority of the people who are doing promotion within our churches when it comes to health are very conservative. They are very much on the on the border when it comes to their understanding of health, and most of them are going to be vegans who will be liking idea of eating vegan food, almost to the point that this is your entry to salvation”. [Pastor 3]

However, it is important to acknowledge that the staunch adherence to veganism and specific health practises of these health promoters may pose challenges in effectively engaging a wider audience. The participant stressed that, their rigid approach can be perceived as exclusionary or inflexible by those with differing perspectives or dietary preferences.

#### 4.2.4.1 Discussion Summary of Theme 4

The observation of the participants on the limited adoption of the health message among pastors in the Adventist church sheds light on a critical aspect of promoting a culture of well-being. While acknowledging the significant influence pastors hold within the church, participants emphasised the need for collaboration between pastors and health leaders to amplify the impact of the health message (Wells et al.,

2022a). This under strengthens the potential for synergy that arises from this collaboration, which could lead to more effective health promotion efforts within the congregation.

Furthermore, the participant recognises, as other studies showed, that people often look to their pastors for guidance and inspiration in various aspects of life (Rivera-Hernandez, 2015). Therefore, the participant suggests that when pastors actively embrace and practice the health message, they become influential role models for the congregation. This alignment between religious and physical dimensions can profoundly affect the church community, motivating people to prioritise their health and well-being.

The participant's proposition for pastors and health leaders to work hand in hand sheds light on the potential synergy that arises from collaboration. By pooling their expertise and resources, pastors and health leaders can develop extensive and impactful strategies that include both religious and physical aspects of well-being (Williams & Cousin, 2021). This concerted effort can extend beyond the confines of the church walls, reaching out to the broader community through initiatives such as walking groups or health-related events (Webb & Bopp, 2017). In addition, the participant's viewpoint aligns with the notion that effective health promotion goes beyond individual efforts and requires a collective and coordinated approach. By embodying the principles of the health message and working together as a united front, pastors and health leaders can positively impact individuals' lives, promoting a holistic understanding of PA (Wilcox et

al., 2022). This therefore recognises that pastoral involvement and support in motivating members to participate in PA.

In addition, pastors recognised their own role as the main educator for their congregation on health issues. They understand that without good health, individuals cannot reach their full potential or experience true happiness. This belief emphasises the interconnection between physical health, PA, and overall well-being (Zheng et al., 2023), thereby highlighting the importance of a holistic approach to personal and church growth.

This viewpoint is similar with the Adventist belief that the body is a temple of the Holy Spirit, noting the significance of taking care of one's physical vessel. In essence, few participants advocated for Adventist pastors to assume the role of health promoters and chief educators within their congregations. By prioritising their own physical health, participating in regular PA, and actively advocating for a healthy lifestyle, pastors can inspire and empower their congregation members to do the same (Brooks-Jefferson, 2023; Williams & Cousin, 2021), therefore contributing to the overall happiness and effectiveness of the Adventist church.

However, participants also acknowledged the magnitude of the task faced by health leaders in presenting the Adventist health message. This recognition highlights the complexity and challenges inherent in conveying an effective health messages or a tailored PA program that encompasses not only physical health but also mental well-

being (Nam et al., 2019) . It implies that the role of the health leader within the Adventist church extends beyond conventional health promotion efforts and requires a holistic approach to health.

From a scholarly perspective, there is ample scientific evidence that underscores the multifaceted benefits of PA for overall health and well-being (Amatriain-Fernández et al., 2020; Olsen et al., 2019; Ross et al., 2023; Sanchis-Gomar et al., 2022; Smothers et al., 2021; Stockwell et al., 2021). Numerous studies have consistently demonstrated that engaging in regular PA reduces the risk of chronic diseases and improves mental health, cognitive function, and longevity (Ekkekakis, 2023; H. Kim et al., 2023; Sorond & Gorelick, 2023). Therefore, overlooking the significance of PA within the health promotion efforts of the Adventist church may lead to an incomplete and potentially less effective approach to promoting optimal health among its members.

Addressing this imbalance and expanding the focus of health promotion efforts within the Adventist church to include PA would require a multifaceted approach that is affected by or effecting multiple levels of influence within the Adventist church. One such framework that would assist this approach is Bronfenbrenner's (1979) SEM, used by other researchers to articulate the conceptual context of their study (Majee et al., 2022; Sidibé et al., 2019). The SEM is further discussed in chapter 7.

Therefore, providing adequate education, training, and support to health leaders and directors regarding the importance of PA alongside dietary considerations is essential. Additionally, integrating evidence-based guidelines and educational resources



on PA within the Adventist health message can contribute to a more holistic and well-rounded approach to health promotion.

#### 4.2.5 Interim Conclusion

These semi-structured interviews played a pivotal role in clarifying the nuances of health promotion within the Adventist church. . The narratives shared by the participants provided valuable information on the emphasis placed on dietary practices, the perceived role of PA, and the broader implications of Adventist beliefs on lifestyle choices.

From the analysis of the interviews and the subsequent divergence of views on deeply held religious beliefs and PA among Adventists in England and Wales, there is a prevailing disconnection between pastors and health leaders, which signifies a crucial challenge. By ensuring that both parties receive adequate training, they can synergise efforts to address behaviour change related to PA. This collaboration should be actively promoted through joint initiatives before disseminating information to lay members, thereby enhancing the effectiveness of our approach. Our results also suggest that pastors, lay members, and health leaders in England and Wales would benefit from investing in training, better social support mechanisms, and a framework to facilitate better health promotion of PA.

## Chapter 5 Examination of the relationship between PA & religiosity

### 5.1 Introduction

Given that Adventists promote the importance of healthy lifestyle and behaviour, we may expect that those who are most religious are those most likely to engage in PA. The present quantitative study aimed to investigate the potential relationship between religiosity and PA among SDA members.

It is worth noting that previous quantitative research has already been conducted within Adventist churches worldwide, including notable studies in Loma Linda, California, United States (Banta et al., 2018; Butler et al., 2008; Loma Linda University, 2022). These studies examined a holistic lifestyle habits among Adventists, including PA and found that Adventists generally live 8 to 10 years longer than the national average because of the benefits derived from healthy lifestyle habits such as PA.

Additionally, previous studies have reported that Adventists tend to live significantly longer, around 8-10 years more than the national average or their non-Adventist counterparts (Charlemagne-Badal & Lee, 2016; McKenzie et al., 2015b). Notably, exercise has been identified as a potential explanatory variable contributing to this longevity (McKenzie et al., 2015a). Given the fundamental doctrines of the Adventist religion, it is suggested that if there is a contemporary emphasis on health among Adventists, it is primarily focused on PA.

Therefore, the hypothesis is that there is a positive relationship between levels of religiosity and levels of PA /exercise among Adventists (i.e., those with higher levels of religiosity tend to be more physically active).

The present study employs a correlational approach to investigate the association between an individual's level of religiosity and their engagement in PA or exercise. The choice of research design for this study was informed by the initial semi-structured interview study findings in this PhD, hence the sequential nature of this study.

## 5.2 Methods

### 5.2.1 Participants

The location of the research was the BUC of Adventist churches in the UK, which also has an established health department that provides various means and resources related to healthy lifestyle behaviours. Demographic information on the general membership of the Adventist church in the UK was provided by the BUC. This showed the registered membership population to be 40,369 of which 24,540 (60.8%) were females, 15,784 (39.1%) males, and 45 (0.1%) were unstated. (read up about null hypothesis)

The inclusion criteria required participants to be 18 years and older, be a baptized member or part of an Adventist congregation in the UK and be able to read and understand English. These criteria were placed at the start of the survey where

participants identified these requirements before proceeding to the actual survey. Most of the population of the Adventist church are situated either in the north of England under the guidance of the North England Conference of Adventist churches (NEC) or in the south of England, guided by the South England Conference of Adventist churches (SEC). Essentially, this was reflected in the figures of those who answered the survey across all the churches in the UK.

### 5.2.2 Recruitment

The commitment from pastors is crucial to the success of any research conducted in religious organisations (Story et al., 2017). This same strategy of pastor and administration support is also essential in an area that is focused on change in health behavior and its effective maintenance (Haughton et al., 2020a). Therefore prior to collecting data, the gatekeepers of the church (pastors) were contacted then other potential respondents (church congregation) were approached both for help with the promotion of the study as well as the opportunity to participate in the research if they wished. A combination of email and person-to-person approaches were used to contact potential respondents.

The BUC which operates as the parent organisation for all the churches in the UK was specifically approached for their approval and endorsement of the study and for the promoting of the research using an email distribution list. In addition, the health department within the BUC of Adventist churches, which is responsible for the general

health and wellbeing of the church was also a key partner in the distribution and endorsement for church participation in the research.

Through collaborative efforts with the BUC, the study aimed to ensure equal access and opportunities for all churches within the BUC to participate in the research. Pastors were notified through the BUC, increasing the likelihood of their agreement to participate, and encouraging their congregation members to join the study. These efforts were facilitated through various communication channels, including social media platforms and direct interaction between the researchers and pastors, health leaders, and general members. The promotion of the study received further assistance from the Stanborough Press, the primary magazine printing service within the Adventist church in the UK. Working in conjunction, these collaborative endeavours aimed to maximise participant engagement and representation from diverse church communities within the BUC, ensuring a wide-ranging and inclusive study sample.

The survey information Sheet (See appendix B) was also attached to the survey which participants will see and read prior to completing the survey. Additionally, a consent form (See appendix C) was attached to the survey, where participants indicated their agreement before they were able to continue.

### 5.2.3 Piloting

A pilot ( $n=5$ ) of the draft questionnaire was carried out to determine key aspects of the questionnaire, such as the time it took to complete the questionnaire, and

whether the instructions at the beginning of the questionnaire were easily understood. After completing the questionnaire, the pilot respondents were also asked for feedback on the clarity and layout of the questionnaire and whether they found the questionnaire interesting.

Email distribution was chosen as the primary method of communication to facilitate participation. This approach was implemented to ensure a smooth and efficient process, allowing the inclusion of respondents who met the specific criteria. All churches within the target population were considered for data collection.

The subsequent sample recruited from the BUC of Adventist churches provided a reasonable representation of the ethnic composition of the population. The population consists of 414 churches and a total membership of 40,369 individuals comprising: Asian (3.6%), Black (56.6%), Mixed (0.6%), White (14.0%), and Other (25.1%) (Seventh-day Adventist church, 2021).

#### 5.2.4 Survey Design

The survey was designed using Qualtrics, complete with two psychometrically validated scales that measured levels of religiosity and levels of (Appendix D & E).

## Religiosity

Researchers have used a plethora of religiosity scales to measure various aspects and levels of religiosity (Francis et al., 2019; Subchi et al., 2022; Taghavi & Segalla, 2023; Villani et al., 2019). However, the 'Belief into Action' scale (BIAC) (Koenig et al., 2015) measures an individual's true religious values and claims of importance in ones' life was chosen to assess levels of religiosity. The inclusion of the BIAC scale in our study serves a crucial purpose rooted in its design philosophy. This instrument was selected to enhance the sensitivity of our measurement in discerning variations in religious commitment among study participants. Its standout feature is its wide range of response options, enabling a detailed assessment of religiosity, from those with minimal religious involvement to those deeply rooted in their faith.

Levels of religiosity were assessed with responses to items such as: (a) "How often do you attend religious services?" (b) "Other than religious services, how often do you get together with others for religious reasons (prayer, religious discussions, volunteer work, etc.)?" (c) "To what extent (on a 1 to 10 scale) have you decided to place your life under God's direction?" (d) "To what extent (on a 1 to 10 scale) have you decided to conform your life to the teachings of your religious faith?" and "On average, how much time each day do you spend in private prayer or meditation?".

The choice to employ the BIAC scale stems from a fundamental recognition of the significance of religion in an individual's life and recognising that genuine

commitment to a belief system often transcends mere verbal assertions of religious devotion. Instead, it manifests in concrete actions, including how individuals allocate their time, talents, and financial resources (Koenig et al., 2015). The BIAC scale captures not only what individuals profess to be important in their lives but also how they prioritize and manifest these beliefs in their everyday activities.

Therefore, incorporating the BIAC scale into this study aligns with a scholarly approach to comprehensively assess religious commitment. This instrument's ability to probe beyond self-reported beliefs and delve into behaviours aligns with the research objective of obtaining a more holistic understanding of the role of religion in the lives of our participants.

The BIAC scale is a 10-item scale that measured participants level of religiosity or religious commitment. The scoring instructions for the religiosity scale were applied in adherence to established and validated guidelines, ensuring the rigor and reliability of the scoring process. Each question was rated on a 1-10 scale except for the first question which obtained a value between 1-10 depending on the participant's response to that question. The total score ranges from 10 to 100.

### **Physical Activity**

The PA scale used in this study, was part of the updated version of the Adventist Health Study-2 extensive questionnaire used since 2002 to assess the lifestyle of Adventists in the United States (US) and Canada (Butler et al., 2008). The PA scale



chosen for this study was selected because of its relevance to the study's context. This instrument was chosen due to its distinct design to cater to the specific demographic of the Adventist population.

Participants provided information regarding the frequency and duration of their exercise and PA sessions. The frequency was assessed by recording the number of times per week individuals engaged in moderate to vigorous exercise or PA sessions. The duration was measured by capturing the length of time, in minutes, spent in each exercise or PA session. By incorporating these variables, the study aimed to obtain as detailed an understanding as possible of participants' PA habits.

The questionnaire also explored the average time one engaged in these activities during a usual week, on a usual Saturday and Sunday. Participants responded to items such as: (a) "How many times per week do you usually engage in regular vigorous activities, such as brisk walking, jogging, bicycling, etc., long enough or with enough intensity to work up a sweat, get your heart thumping, or get out of breath?" (8 options from never to 6 or more times were week), (b) "On average, how many minutes do you exercise each session?" (8 options from None to more than 1 hour), (c) "Do you have a regular exercise program? (Yes or no), (d) "On average, how many minutes do you exercise each session?" (8 options from None to more than 1 hour). These items have all been previously validated (Pramil et al., 2008; Singh et al., 2001). Questions also included a range of intensity of PA or exercise from moderate to extremely vigorous. The AHS-2 PA scale also measured the amount of time spent sleeping.

Exercise was evaluated by quantifying the number of days per week during which individuals engaged in moderate to extremely vigorous PA, such as brisk walking, running a marathon, or heavy lifting. The duration of each exercise session was measured in minutes or as minutes per session. For analysis, exercise session durations were assigned quantitative weights to accurately represent the varying levels of intensity and effort exerted. See Appendix F.

Furthermore, the PA scale recognises and integrates the multifaceted nature of PA in the lives of Adventist individuals. It acknowledges that PA within this population extends beyond conventional exercise and includes activities integral to their faith, such as gardening, community service, and participation in religious rituals. Therefore, by employing the PA scale in the study, the researcher is not only utilizing a measurement tool that aligns with the unique characteristics of the Adventist population but also acknowledging the intrinsic connection between their religious beliefs and their health-related behaviours. This tailored approach allows us to explore and elucidate the intricate interplay between religious convictions, lifestyle choices, and health outcomes within the Adventist community, contributing to a more nuanced and contextually relevant understanding of this relationship.

The maximum score that a participant could report is 390 based on the recoding formulae of the scale.

## **Demographics**

The demographic variables collected for this study encompass age, sex, ethnicity, and education. Age is measured in years, offering information on the distribution of participants in different age groups and facilitating age-related analyses. Sex categorises participants as female or male, aiding in gender-based comparisons and understanding gender distribution within the sample. Ethnicity captures participants' racial or cultural backgrounds, categorised into groups such as Black, White, Other, Mixed, and Asian, allowing for exploration of ethnic influences on study outcomes and ensuring sample diversity. Education level reflects participants' educational attainment, ranging from No Formal Education to various degrees like bachelor's degree, Masters, PHD, among others, shedding light on participants' educational backgrounds and potential impacts on study variables. These demographic variables collectively provide a comprehensive understanding of the study sample and facilitate analyses of the relationships between PA, religiosity, and demographic factors.

### **5.2.5 Data Processing and Analysis**

Levels of religiosity were assessed using the BIAC scale (Koenig et al., 2015). The BIAC scale is composed of 10 questions evaluated on a 1-10 scale apart from question 1, which requires the participant to indicate or choose their highest priority in life. See Scoring Instructions in Appendix D.

The PA scale included times per week and minutes per session of moderate to vigorous and extremely vigorous exercise activity per week and consisted of 13 validated questions. Questions relating to moderate exercise were described as “fast walking, golfing, casual swimming, casual cycling, etc.” Vigorous exercise activity was described as “running or jogging, team sports, vigorous lap swimming, aerobics, calisthenics, frequent lifting of objects 20 to 35 pounds.”

Extremely vigorous exercise activity was categorised by “heavy weightlifting, running a marathon, fast sprinting, repeatedly carrying or lifting 40lbs or more.” Participants indicated how many times per week and how many minutes per session they exercised in each category. The scoring of MVPA based on this scale will provide insights into whether Adventists are meeting (150 mins per week) or not meeting (less than 150 mins per week) recommended guidelines for PA.

Descriptive statistics were used to characterise the sample, presenting numerical summaries (e.g., frequencies, percentages, means values). Subsequently, the normality of the PA and religious summary variables was assessed through visual inspection of histograms revealing non-normal distributions in the responses to two scales.

The analysis used in this study involved performing a two-tailed Spearman correlation analysis to examine the potential relationship between religiosity and PA. This analysis is suitable for investigating associations between variables without assuming a linear relationship or adherence to normality assumptions. When working

with non-normally distributed data, it is advisable to evaluate the relationship between variables using correlation coefficients derived from rank-based calculations (Alsaqr, 2021). Spearman's rho accounts for the ranks of the data rather than the actual values, making it suitable for non-parametric analysis when the data do not follow a normal distribution (Miot, 2018).

Logistic regression analysis was then conducted to explore whether religiosity was associated with the odds of participants meeting or not meeting recommended levels of PA (binary outcome variable where not meeting recommended PA levels was coded 0 and meeting them was coded 1). This relationship was first examined with a univariate model, then with adjustment for potential confounders (age, sex, and education).

## Results

### 5.2.6 Sample Characteristics

A total of 83 participants completed the survey, 58% were females and 42% were males. Participants ranged in age from 18-90 years (see table 3) and were mostly black (54.2%, n=45) (see table 4), with 32.5% having a primary education and 21.7% having completed Post Graduate studies (see table 5). Members representing 8 demographic regions of the BUC completed the survey with the largest proportion of participants from the NEC (32.5%) (see table 6). The mean age was 51.72 and a standard

deviation of 17.7. Table 4 shows that survey participants included pastors ( $n=5$ ), health leaders ( $n=3$ ), other leaders ( $n=33$ ), and other church members ( $n=41$ ).

**Table 5** Descriptive data of survey participants ( $N = 83$ )

	Number	Percentages
<b>Sex</b>		
Female	48	58.0
Male	35	42.0
<b>Age (Years)</b>		
18-28	10	12.0
29-39	13	15.7
40-50	7	8.4
51-61	15	18.1
62-72	8	9.6
73-83	30	36.1
<b>Ethnicity</b>		
Black	45	54.0
White	27	33.0
Other	5	6.0
Mixed	4	5.0
Asian	2	2.0
<b>Education</b>		
Bachelor's Degree	27	33.0
Secondary Education	25	30.0
Masters	18	22.0
Post Graduate Diploma	6	7.0
PHD	4	5.0
Post Graduate Certificate	2	2.0
No Formal Education	1	1.0
<b>Church Role</b>		
Church Member	42	50.0
Other Leader	33	40.0
Pastor	5	6.0
Health Leader	3	4.0
<b>Conferences/Companies</b>		
SEC	26	31.3
NEC	27	32.5
Welsh Mission	18	21.7

Welsh Companies	2	2.4
Irish Mission	5	6.0
Irish Companies	2	2.4
Scottish Mission	2	2.4
Scottish Companies	1	1.2

### 5.3 Levels of PA

Over half of respondents (55%) reported a consistent adherence to regular a PA and exercise routine. In particular, the intensity level of the exercise regimen was perceived by over 33% of the participants as moderate to some-what hard. In terms of frequency, times per week engaging in vigorous activities, over 19% reported to do so three times a week, involving activities such as running, walking, and cycling.

Duration of exercise sessions varied, with 15.5% reported spending an average of 31-40 minutes, 14.5% spending 21-30 minutes per session, 12% however reported spending over one hour in each session. Just over 8% did not engage in any PA at all. Among the popular exercise activities, walking, running, and jogging emerged as common choices, with 66% covering up to three miles per week, and a 34% covering four miles or more.

In terms of moderate activity, the participants disclosed the time allocated to leisure activities such as fast walking, casual cycling, and leisure swimming on typical weekdays, Saturdays, and Sundays. A total of 43.3% reported they did not exercise on a typical Saturday, and most showed higher activity levels of moderate activity on typical

weekdays. However, a smaller number of Adventists also reported moderate participation in PA on Sundays.

A small (12%) proportion of Adventists engaged in vigorous exercise activities, predominantly on Sundays, with an average session duration of 20 minutes. However, the majority did not participate in vigorous exercise activities such as team sports, running, and fast cycling on a typical Saturday. This may be because Adventists are discouraged from such level of activities on a Saturday which is normally reserved for church attendance. Less than 5% reported that they participate in extremely vigorous PA or exercise on a usual Saturday, less than 6% did so on a usual Saturday and 9.5% reported to engage in extremely vigorous exercise or PA on a usual weekday. These activities included heavy weightlifting or fast running each week. See Appendix G.

#### 5.4 Levels of Religiosity

The religiosity scale assessed various dimensions of the religiousness among Adventists. These included but were not limited to religious giving, religious service attendance, religious organisation (active involvement in services), and non-religious organisation (private prayer etc). The first question on the religiosity scale required participants to indicate what they considered as absolute priority in their lives. More than 61% indicated that their relationship with God was their main priority, followed by family (22%). Health was further behind with just over 9%. Less than 3% reported that their career was more important and just over 1% shared that finance, friends, and



freedom was more highly prioritised in their lives. Notably, health was not at the top of the list or even second to a relationship with God.

Some participants (40%) attended religious services on average once a week, while just over 25% reported to attended services more than once per week. A total of 19.2% reported meeting for religious reasons other than church services (prayer, volunteering). Religious giving demonstrated levels of commitment to the church, with most (53%) regularly giving between 9%-12% of their wage to the church, while over 21% of the respondents gave up to 15% of their gross annual income to the church.

Notably, 26.5% of respondents engaged in nonreligious organisation habits by watching religious programmes on television or listening to the radio, spending between 31-60 minutes doing so. The same amount of time (31-60 minutes) was reported to have been spent reading religious materials. Private religious practise such as prayer was done on average 21-30 minutes each day by 24% of the participants.

### 5.5 Analysis of PA & Religiosity Relationship

The Spearman's rank correlation coefficient between Religiosity and PA was -0.058, and the associated p-value was 0.600. This provides no evidence of a relationship.

The PA variable was dichotomised to see if participants met recommended PA guidelines. This is because the survey suggested participants self-reported to be highly active, potentially meeting recommended guidelines. The binary variable provided the

opportunity to create two groups, those who met recommended guidelines of 150 minutes of MVPA per week (coded as 1) and those who did not meet recommended guidelines (coded as 0). While most of the sample reported engaging in PA, only 30% of the participants met the recommended guidelines of 150 minutes of MVPA per week.

The logistic regression analysis examined the relationship between the levels of religiosity, and odds of being active at recommended levels (see table 6). The odds ratio (Exp(B)) of 0.635, along with a wide 95% confidence interval spanning from 0.118 to 3.431 indicates that religiosity is not associated with the odds of meeting recommended levels of PA.

**Table 6.** Logistic Regression Analysis Predicting PA

		Sig.	Exp(B)	95% C.I. for EXP(B)	
Step	Religiosity Score			Lower	Upper
1 <sup>a</sup>	Religiosity Score	.598	.635	.118	3.431
	Constant	.080	.250		

a. Variable(s) entered on step 1: Religiosity Score

b. Sample size N= 83 the outcome variable is PA

The Nagelkerke R square, a measure that indicated how well the logistic regression model explains the variability in PA, is 0.006. This small value suggests that the current model has limited explanatory power, accounting for only a minor fraction (0.6%) of the variability observed in the dependent variable. The low Nagelkerke R

Square underscores the need for caution in relying solely on the current set of predictors, indicating the potential presence of unaccounted-for factors influencing PA.

Adjusted logistic regression analysis was performed, including sex, education, and age (Table 7). The results revealed that none of the predictor variables were statistically associated with the odds of meeting PA recommendations. Religiosity, age, and sex did not show a statistically significant association with PA, as evidenced by odds ratios (OR) and their respective 95% confidence intervals (CI) that included 1. Specifically, for religiosity, the OR was 0.406. The OR for age was 0.771, which suggests a potential trend wherein the likelihood of engaging in PA may decrease with age, as reflected by the OR. The OR for sex was 1.196, indicating that the likelihood of engaging in PA is not significantly different between males and females. The result is also not statistically significant ( $p=0.823$ ), indicating that there is insufficient evidence to support the assertion that one sex is more likely to engage in PA than the other, based on this analysis. Education demonstrated no significant association with PA. The OR for level 2 education was 4.386 (95% CI .754, 25.5105, but again, this was not significant. .

**Table 7.** Logistic Regression Association between Religiosity, Education, Age, Sex

Step		Sig.	Exp(B)	95% C.I.for EXP(B)	
				Lower	Upper
1 <sup>a</sup>	Religiosity	.366	.406	.057	2.873
	Ages				
	19-39	.835	.771	.068	8.800
	40-59				
	≥60				
	Sex				
	Male	.823	1.196	.251	5.707
	Female				
	Education	.120			
	Level 1	.782	.702	.057	8.646
	Level 2	.100	4.386	.754	25.505
	Constant	.235	.164		

a. Variable(s) entered on step 1: Religiosity, Ages (19-39=1, 40-59=2, ≥60= ), Sex (M=, F=2), Education (non-secondary= Level 1, Bachelors= Level 2, Postgraduate= Level 3).

## 5.6 Discussion

The findings of this study have several implications. First, they suggest that, within the scope of this study and the measures employed, there is no evidence to support the idea that religiosity is significantly associated with PA levels among Adventists in the UK. Second, the lack of a significant relationship could imply that other factors, not examined in this study, such as socioeconomic status, cultural factors, or mental health, that could influence both religiosity and PA, could play a more crucial role in determining PA behaviours among individuals with varying levels of religiosity.

It is also worth noting that no discernible link was found between meeting PA recommendations and other variables such as age and education, where one might anticipate an association. This raises questions regarding the sample (which was

perhaps not representative of the wider Adventist population) and the data (sample size was perhaps not large enough). Therefore, it is crucial to acknowledge these constraints when interpreting the study's findings. The absence of anticipated correlations between PA and known demographic correlations highlights the need for further investigation in a larger sample.

In contrast to the study by McKenzie et al, focusing on Black Adventists in Canada (McKenzie et al., 2015b), the present research on Adventists in the UK examined their adherence to government PA guidelines. While McKenzie et al (2015) investigated the broader realm of health-related behaviours, this study places a distinct emphasis on evaluating the extent to which Adventists in the UK meet the recommended PA levels outlined by governmental guidelines and that of the WHO (Bull et al., 2020). This deliberate focus allows for a targeted examination of the alignment between Adventist beliefs and practices and adherence to official health standards. By focussing on government-recommended guidelines, this research contributes valuable insights into the potential impact of religious beliefs on specific health behaviours as endorsed by national health authorities, providing a nuanced perspective within the context of the UK's regulatory framework.

Additionally, when comparing the results of an earlier study by Lindsted et al. (1991) with this research, notable differences in focus and outcomes become evident. Lindsted et al.'s study primarily examined the self-reported PA and mortality patterns among Adventist men, with a specific focus on adherence to recommended guidelines

for PA (Lindsted et al., 1991). In contrast, this study expanded the scope to encompass both men and women within the Adventist community in the UK, exploring the correlation between PA, religious beliefs, and adherence to recommended guidelines. The findings revealed that Adventists in the UK, regardless of gender, demonstrated lower adherence to the recommended PA guidelines, shedding light on the impact of religious beliefs on PA habits within this community. This comparison emphasises the importance of considering gender inclusion and the influence of religious beliefs when evaluating adherence to PA within specific populations, thus contributing to a more extensive understanding of these behaviours.

In McKenzie et al.'s (2015) investigation on Black Adventists in Canada, a positive correlation between religiosity and PA levels was found, which suggested that heightened religious involvement was associated with increased engagement in PA (McKenzie et al., 2015a). On the contrary, in this study, which focused on PA among Adventists in the UK, a contrasting result became apparent. Findings indicated a negative to weak correlation between levels of religiosity and PA, suggesting that, in the UK context, greater religiosity did not necessarily correspond to heightened PA levels among Adventists. This outcome underscores the significance of accounting for cultural and contextual factors when exploring the intricate relationship between religiosity and health-related behaviors.

The findings of this study therefore provide preliminary information that suggests a lack of association between religiosity and PA among Adventist. Future

studies should explore this relationship in greater depth to obtain further understandings of other determinants of healthy behavioural habits, such as PA. Therefore, this finding aligns with the previous qualitative phase, suggesting that religiosity is not being perceived in a way that encourages individuals to engage in PA and exercise. Consequently, the final phase of the study will explore the reasons behind this and explore potential solutions.

It is however important to acknowledge that a negative result do not necessarily imply that the various dimensions of religiosity, whether organisational (such as public worship and church attendance) or non-organisational (such as private prayer and religious reading), hinder individuals from engaging in PA. However, this suggests that churches can promote PA without concern of distracting people from their religious commitment to other church activities. Furthermore, two noteworthy possibilities have come to light. Firstly, the extended duration of membership among a significant portion of participants suggests that the health promotion message concerning PA may not be effectively reaching the most devout members. This observation raises questions about the efficacy of current communication strategies and calls for consideration of tailored interventions to ensure that health-related messages resonate with this dedicated demographic.

Secondly, it should be emphasised that in this study, neither religiosity nor demographic variables such as age, gender, and education demonstrated a significant association with the study outcomes. This finding suggests a departure from existing

research (An et al., 2020; López-Bueno et al., 2020) which indicates a correlation between these variables and health outcomes. Despite the lack of association in this study, there remains potential for tailored health promotion efforts within the Adventist population in the UK, targeting specific demographic subgroups. By addressing the unique needs and characteristics of these subgroups, tailored interventions may hold promise for achieving more impactful results in promoting PA and overall health.

The study encountered limitations related to under recruitment, as the obtained sample constituted less than 25% of the initially intended target, potentially limiting the ability to detect statistical associations. Furthermore, the observed discrepancy in the association between known correlates of PA in the general population and PA levels within this study prompts a needed examination of the data reliability. As discussed previously, while one possible explanation for this disparity could be the underpowered nature of the study due to the limited sample size, it is equally plausible that the composition of the sample differs from both the general population broader and other Adventist populations where such relationships (Leibow et al., 2021; Morton et al., 2012, 2017) have been observed. This underscores the importance of considering potential variations in sample characteristics when interpreting the study's findings and highlights the need for caution in generalising the results to broader populations or other Adventist churches.

Finally, most participants did not undertake volunteering activities, although research consistently demonstrates a positive association between attendance at



religious services and volunteering (Aksoy, 2024; Petrovic et al., 2021), with people who regularly attend religious services being more likely to engage in volunteer work compared to those who attend less frequently or not at all (Petrovic et al., 2021).

## Conclusions

Among the population studied, which included both highly physically active and other Adventists, an examination of their measures of religiosity and PA revealed no evidence suggesting that religiosity is associated with their PA levels. However, this finding should not be interpreted as a definitive absence of a relationship between the variables.

It is important to emphasise that the absence of evidence should not be misconstrued as evidence of absence. However, the lack of a positive correlation, combined with the findings of the qualitative study, affirms the notion that there is a lack of messaging within the church that effectively influences individuals' behaviour toward PA.

Furthermore, it is noteworthy that the Adventists' inclination to PA appears to be largely unaffected by their religiosity. These results suggest that, as far as the available data indicates, the Adventist Health message regarding PA has failed to resonate with church members and has a minimal impact on the daily awareness and practices of Adventists in the UK. Given these outcomes, along with the initial qualitative semi-structured study's insights, a natural question arises: "What measures can be taken to

reinforce the significance of PA within the Adventist church?". Exploring this question will be a key focus of the subsequent phase of the study, which will be a series of focus group sessions to explore the perspectives of pastors and health leaders on health promotion, the health message, and their potential impact on the attitudes of the church community toward PA.

## Chapter 6 Focus Group Study

### 6.1 Introduction

The findings derived from prior investigations conducted within the context of this PhD research experience suggest that the level of religiosity exhibited by Adventists does not significantly influence their propensity for engaging in regular PA. This intriguing finding highlights a notable disparity between the religious teachings of the Adventist church and the actual participation of its members in PA. The focus groups allow us to explore what the key factors are that are influencing the adherence to exercise among individuals practicing the Adventist lifestyle, as identified through focused group discussions?

This qualitative approach allows for an in-depth exploration of their views on health promotion, the health message, and the potential impact of these beliefs on the attitudes of the Adventist church towards PA. By examining the potential divergence of views on deeply held religious beliefs and PA across the UK, this study aims to shed light on the underlying factors contributing to the observed disconnect between religious teachings and PA practices.

Understanding the perspectives of pastors and health leaders is significant as they play a crucial role in shaping the beliefs and behaviors of the church. The decision to limit the focus group study to pastors and health leaders while excluding general members was strategic and rooted in the recognition of the influential roles these

individuals play within the church community. Pastors and health leaders, as identified in the literature, serve as central figures in shaping the beliefs, attitudes, and behaviours of congregants (Gross et al., 2018; Hellman, 2022; Williams & Cousin, 2021). Their leadership positions afford them a unique perspective and influence over the congregational dynamics, making them central figures in the dissemination of health-related information and promotion of positive behaviors, including PA engagement.

Baruth et al. (2015) and Moore et al. (2024) highlight the crucial role of pastors as spiritual leaders who not only guide the religious aspects, but also serve as influential figures in shaping overall lifestyle choices within the faith community (Baruth et al., 2015; Moore et al., 2024). Additionally, health leaders are often designated individuals with specialised knowledge in health matters, making their perspectives valuable in understanding the health promotion landscape within the church (Hellman, 2022; Whitt-Glover et al., 2014).

By focusing on pastors and health leaders, the study aims to capture the insights of those who are positioned to influence and guide the congregation in matters related to health and PA. Their perspectives are deemed instrumental in identifying barriers, opportunities, and effective strategies to promote PA within the context of the Adventist church. While acknowledging the importance of members' views, this targeted approach ensures a concentrated exploration of the key influencers who can drive and facilitate health promotion initiatives within the church (Williams & Cousin, 2021).

This selective focus is consistent with the approach taken in similar studies investigating health promotion within religious communities (Baruth et al., 2015; Maxwell et al., 2022; Sidibé et al., 2019; Story et al., 2017; Whitt-Glover et al., 2016). These studies emphasise the importance of understanding the perspectives of leaders to influence health-related behaviours among their followers. Consequently, focussing on pastors and health leaders, the study aims to provide in-depth information on the factors that influence PA promotion within the Adventist context, ultimately contributing to the development of effective health promotions tailored to the specific dynamics of this faith community.

Therefore, the findings from Study 3 can also inform the development of targeted interventions and training programs for pastors and health leaders to better respond to the behavior change needs of the Adventist church, thereby facilitating the integration of PA into their daily lives. The study identified social support mechanisms as a crucial factor in promoting PA within the Adventist church. The findings highlight the importance of establishing a systematic framework that facilitates effective health promotion strategies for PA within the Adventist church in the UK.

### 6.1.1 Methods

In the continuum of our research, stage 3 is integral, extending and enhancing the insights gained in stage 1, which primarily consisted of semi-structured interviews. The necessity for stage 3 arises from the recognition that a more profound

understanding is required. Thus, we employ the focus group methodology, based on the insights derived from individual interviews. This strategic expansion enables a richer exploration of the lived experiences and perspectives of participants, facilitated by thematic analysis (Braun & Clarke, 2014; Kiger & Varpio, 2020; Noh & Shahdan, 2020). Ethical approval from the Research Ethics Committee of Staffordshire University safeguards the rights and welfare of participants during this research phase.

### 6.1.2 Aim

Stage 3 is specifically designed to unravel the viewpoints and opinions of pastors and health leaders within the Adventist church in the UK regarding PA and health promotion initiatives. This phase surpasses the preliminary semi-structured interviews, delving into a deeper exploration of underlying beliefs, experiences, and perspectives. The deliberate exclusion of general members directs our focus towards key decision-makers and influencers within the church community. Therefore, pastors and health leaders, who play a central role in the shaping of health promotion initiatives (Syed et al., 2023), were the focal point of this research.

Central to our investigation in stage 3 is the exploration of the relationship dynamics between pastors and health leaders. This intentional emphasis seeks to gain profound insight into their collaboration on health promotion and PA within the church. The centrality of this investigation is instrumental in informing future strategies for fostering cooperation within the church community. For an exhaustive overview of the

research questions and prompts addressed in this focus group investigation, refer to Appendix H. The themes derived from this analysis will contribute to structured recommendations, providing valuable information to both the Adventist community and future research efforts.

### 6.1.3 Design

The use of focus groups allowed for interactive and dynamic discussions among the participants, enabling the exploration of diverse perspectives and experiences related to the research topic (Nyumba et al., 2018). The selection of an online format for the focus groups provided flexibility and convenience for participants, allowing them to engage in discussions from their own locations. This approach also facilitates broader inclusivity, as participants from different geographic areas could easily participate in the study.

To ensure rigour and quality of the study, focus group sessions were carefully planned and structured, with well-defined discussion topics and questions related to the research area. The topics and questions derived directly from the findings of the first two studies that explored and highlighted the emphasis on the health message as the channel of health promotion within the Adventist church. These two studies shed light on the perception that only certain aspects of the health message are prioritised, with PA being neglected. Therefore, it was necessary to delve into the reasons behind this perception and propose potential strategies to address it.

The emphasis on specific aspects of the health message within the Adventist church was a key issue that emanated from the previous two studies. In other words, the observation that only certain aspects of the health message were emphasised within the church, with PA receiving less attention, was a pertinent finding of the studies. To delve into the reasons behind this perception and propose potential strategies for change, the questions and topics as outlined were constructed.

Collaborative efforts of pastors and health leaders in promoting PA were strongly featured among possible strategies by church members particularly, who expressed the belief that pastors and health leaders working together can greatly impact the church's attitude towards the health message, particularly in terms of PA promotion.

In addition, when participants considered the general health status of church members and pastors and the integration of the health message within the church, several important considerations arose. These include responding to the health needs of the church, connecting the health message and promotion of health with the mission of the church, incorporating the beliefs of the church into the PA, and maintaining a collaborative approach between pastors and health leaders.

Therefore, the questions and topics not only addressed important aspects of the Adventist's emphasis on the health message but also shed light on potential barriers that may hinder effective health promotion. These enquiries highlight the perception that certain aspects of the health message, such as, may be overlooked within the church. Additionally, the collaborative efforts of pastors and health leaders, the need for



support components, and the integration of church beliefs into physical health and PA promotion point to potential challenges that must be overcome. Recognising these barriers is crucial in designing intensive strategies and interventions to promote a more holistic and inclusive approach to PA and physical health within the Adventist church.

Focus group sessions were done virtually which allowed for flexible and wider inclusivity (Marques et al., 2020) of pastors and health leaders across England and Wales, thus having good representation across the conferences (south England conference and north England conference and Welsh Mission). Equally, focus groups play an important role in qualitative research and is recognised as an effective method for collecting data that explores participants' opinions, experiences, and perspectives (Marques et al., 2020; Martinez et al., 2016). Indeed, a key purpose of focus groups is to generate data and knowledge from group interaction that would be less salient via interview format. This is typically conducted with 4-6 participants in 2-3 focus group sessions, with each session lasting between 1-2 hours (Carnahan et al., 2018; Joseph et al., 2017; Marques et al., 2020).

#### 6.1.4 Participants and Recruitment

Pastors and health leaders within the Adventist church in England and Wales were purposively selected based on the study's objectives and the knowledge of the study population. Additionally, efforts were made to ensure adequate diversity in terms of race, culture, and gender among the participants, aiming to capture a broad range of

experiences and perspectives that exist within the studied population or phenomenon under investigation(Koerber & McMichael, 2008).

In this study, a purposive sampling approach was used to select participants who met specific criteria. To ensure effective contribution to the research objectives, individuals were required to possess the ability to speak, read, and understand English. This criterion was considered essential as it allowed for active participation during the focus group sessions. Before the sessions were conducted, participant information forms and consent forms were sent to potential participants. These forms contained detailed information about the study and required participants to provide their informed consent by signing and returning the forms. By implementing this process, it was ensured that participants had the necessary language skills and maturity level to actively engage in the research process. This methodological approach aimed to maintain scientific rigour and validity in the selection of participants for the study.

To secure diverse representation and increase generalisability of the study, invitations were extended to potential pastors and health leaders from various conferences within England and Wales. The participant recruitment process involved sending invitations via email, preceded by initial phone contact. During telephone conversations, pastors and health leaders were informed about the study and given the opportunity to express their interest or decline participation. This approach ensured that pastors and health leaders had a clear understanding of the study objectives and requirements before indicating their willingness to participate. By combining phone

contact and email invitations, the study aimed to enhance the transparency of the recruitment process and maximise the likelihood of securing engaged and informed pastors and health leaders.

### 6.1.5 Data Collection

The focus group sessions were conducted online via TEAMS and each session lasted between 1-2 hours, following recommended guidelines (Nyumba et al., 2018). These sessions were recorded and transcribed verbatim using Otter.ai software. Each group comprised a moderator (the researcher) and a diverse group of pastors and health leaders. The researcher guided the discussion by asking relevant questions and prompts aligned with the topic of the enquiry. The transcriptions were then analysed thematically through an iterative process to identify significant themes emerging from the participants' discussions, to address the objectives of this phase of the study, and subsequently answer the research question.

Before the beginning of each focus group session, participants verbally confirmed that they had thoroughly reviewed the participant information sheet (see Appendix I), provided their signed consent forms (see Appendix J), and were given the opportunity to ask about study participation and withdraw from sessions if they chose to do so.

The study used online focus group sessions as a means of cultivating a participatory environment, allowing participants to openly exchange perspectives, share

their experiences, and contribute to the generation of recommendations. This collaborative approach facilitated the identification of consensus-driven suggestions and action plans, which were in line with the initial semi-structured interview prompts. The objective was to develop practical and widely applicable measures that could be implemented within the context of the Adventist church.

The data collected from the focus group sessions underwent rigorous analysis, utilizing established qualitative research methods. Thematic analysis, following the guidelines presented by Braun & Clarke (2021), was used to identify recurring themes, patterns, and key insights derived from the discussions. This systematic approach facilitated the extraction of meaningful findings, and the generation of practical recommendations aimed at reinforcing the importance of exercise within the Adventist lifestyle.

#### 6.1.6 Data Analysis

The thematic analysis approach used in Study 3 mirrored the methodology detailed in Study 1. This six-phase process, guided by Braun et al.'s (2021) framework, involved immersion in the data, generation of initial codes, organisation of codes into potential themes, review and refinement of themes, definition and naming of final themes, and alignment of the analysis with the research questions (Braun & Clarke, 2020, 2021). The resulting analysis contributes to the understanding of the subject matter in a clear and reflective manner.

Applying thematic analysis to focus group data involves several contemporary challenges. One primary challenge is the sheer volume and complexity of data, as focus groups often generate rich, multilayered discussions that can be difficult to distil into coherent themes (Nowell et al., 2017). Additionally, the dynamic nature of group interactions can complicate the analysis, as dominant participants may skew the discussion, potentially influencing the data's representation (Nyumba et al., 2018). Ensuring that the analysis captures diverse perspectives and contextual nuances while maintaining rigor in theme identification and coding is also challenging (Braun & Clarke, 2021). Addressing these issues requires a careful and systematic approach to ensure that the thematic analysis accurately reflects the range of viewpoints and the context of the discussions.

### 6.1.7 Results

Three separate focus group sessions were conducted, each with a distinct cohort of participants attending a single session. Most sessions consisted of 5 participants, with one session accommodating 6 participants. In total, there were more male participants ( $n=11$ ) than female participants ( $n=5$ ), providing a gender distribution within the study. The initial number of individuals approached for participation in the focus group study was 25, of which 7 did not respond and 2 were unable to attend due to prior commitments. Consequently, the final sample consisted of 16 participants, comprising 9 pastors (56.25%) and 7 health leaders (43.75%), ensuring representation from both roles within the context of the Adventist church.

In addition, the church Conference and Mission representation showed that 38% of the participants were from the NEC, 19% from the SEC, however 44% of the participants were from the Welsh Mission of Adventist churches.

From the analysis 3 themes emerged from the three focus group discussions among participants which are shown in table 8 below.

**Table 8:** Themes and Subthemes Identified in the Analysis

Themes	Sub-Themes
Diverse interpretations of sacred textual sources	Interpreting health and wellness guidelines from religious texts Balancing spiritual teachings with modern health recommendations Personal beliefs and practices influenced by interpretations of sacred texts
Cultural Barriers to healthy exercise	Church teachings promote a holistic approach to health. The role of community support and encouragement in adopting healthy lifestyles Cultural norms and traditions shaping health behaviors within the Adventist church
Need for accountable and empowered leaders.	Pastoral guidance and leadership in promoting health and wellness. Empowering church leaders to serve as role models for healthy living. Establishing accountability measures to support health initiatives led by leaders

## Explanation and nature of sub-themes

The sub-themes identified in this study are underlying dimensions of the broader themes and should be understood as integral but implicit aspects rather than discrete categories with separate headings. These dimensions enrich the thematic analysis without being presented as standalone sub-sections. This approach ensures a cohesive exploration of the main themes while capturing their nuanced elements.

## 6.2 Themes

### 6.2.1 Theme 1

#### **Diverse interpretations of sacred textual sources**

The convergence of biblical context and the Adventist's embrace of EGW's direct visions and guidance pertaining to healthy lifestyle habits, including PA, resonated throughout the focus group sessions conducted with pastors and health leaders. A prevailing consensus within these discussions indicated a general acceptance of the necessity, importance, and indispensability of engaging in PA. However, pastors and volunteer health leaders participating in the focus groups revealed a substantial divergence in the interpretation and possible misinterpretation of both the biblical passages, within their respective contexts, and EGW's guidance regarding PA. Notably, this divergence persists despite the assertion that the Adventist's health message originates from biblical principles (Galvez, 2010).

“... I think that there is a major problem with our interpretation of what the Bible teaches about health and what EGW also teaches about health”. (Health Leader).

“Physical exercise is seen as something personal; it is not viewed in the sense of a spiritual activity... we don't see anyone going out and exercising or doing any kind of physical exercise. “ (Pastor).

“It is nice to [in quotation marks], obviously blame scripture here, but even the apostle Paul said to Timothy that physical exercise is of benefit. He just didn't harp on about it... he did his entire ministry walking a lot, so it is very much biblical”. (Health Leader).

The focus group participants observed that a limited grasp of biblical contextual understanding and its application to PA within the Adventist church has led to a noticeable emphasis on nutrition, resulting in a potential misinterpretation of health. In their reflections on EGW writings and guidance concerning healthy lifestyle habits, participants noted a substantial focus on the Levitical dietary system. They further remarked that while it is relatively straightforward to draw connections between biblical dietary prescriptions, making similar associations regarding PA habits poses a greater challenge.

“I can only give my perspective when it comes to the health message...often the case is, when we read Ellen White's writings, it's not really elaborated to run a mile or, to go swimming for 10 metres... there's always more emphasis in the church on vegetarianism and now it's veganism.” (Pastor)



The pastors and health leaders recognised the complementary nature of health principles, including PA, within the messages conveyed in both the Old and New Testaments. They observed that these principles are consistently emphasised throughout the biblical narratives, spanning different historical periods. Notably, the Old Testament era, characterised by distinct cultural contexts vastly dissimilar from contemporary post-modern Western society, attested to the prominence of a balanced lifestyle. In contrast, the current concern regarding sedentary lifestyles and work environments underscores the need to address the challenges posed by a modern society marked by reduced PA .

“...just go through the Old Testament and you pick up the themes of very balanced lifestyle that the Bible is presenting to people...now you go to New Testament, and you hear messages about the whole heart, soul and mind in all different areas... you can see harmonic growth where you develop spiritual, physical, and obviously mental”. (Pastor).

It was generally agreed that EGW further endorses the writings of the Bible within her guidance to the global Adventist church on matters relating to living a balanced and healthy lifestyle which included PA.

“...you can find similar advocations in the writings of the Ellen White, not just of hers but of other church pioneers”. (Health leaders).

Leaders in all 3 focus groups emphasised the ongoing challenge associated with the tendency to remove biblical passages from their original context, which has had

detrimental effects on the packaging of the health message. It was observed that the language employed in conveying the message might have contributed to misunderstandings, thereby raising concerns regarding its relevance and practical application. To address this issue, it was deemed essential to prioritise a clear distinction between the counsels provided to the church, ensuring a more accurate interpretation and appropriate implementation of the health message.

“... We are bound by our language, and that includes our attitude toward our use of, and our misuse and abuse of the counsel we received from EGW on these matters.” (Pastor).

“Some of us are overweight, but nobody ever says anything about it. So, I think we change for better, but I do think it stems from the Bible and, and Ellen White's writing” (Health Leader)

Participants felt that, due to misapplications of the Adventist's health teachings, combined with the way these teachings are propagated, significant repercussions have ensued.

“I think the messaging needs to change... So we had been hearing about the dietary and the emphasis there. And I think the more we bring the message of the holistic and the PA being important, the more people will hear it... this is a very conscious effort to get not just our membership, but the community actively involved in PA, and we support that with writings from Ellen White, the Bible and other counsel in the material”. (Pastor)

The perspectives voiced by one participant in the focus group 1 corroborate the observations made by Galvez (2017), suggesting that the original holistic framework of the health message has been progressively marginalised, with an overemphasis on a singular aspect, primarily centred on veganism or vegetarianism. Therefore suggesting that this narrowing interpretation disregards the broader dimensions of holistic health and nullifies interests.

“I do believe that in our churches, we do emphasise mostly on diet, and that is putting people off... I think the more we bring a holistic message and the PA being important, the more people will hear it”. (Health Leader)

Additionally, the limited availability of adequate resources and the misguided perception of the health message as a litmus test for spiritual salvation have further contributed to this issue. Notably, even among leaders themselves, the discourse surrounding PA remains limited, despite the mounting concern over escalating obesity rates.

Subsequently, the need for a well-defined and universally understood interpretation of the health message was emphasised as a priority within the church. In response to this proposal, a health leader expressed that...

“The purpose of the health message is not health, but it is about giving glory to God in your body”. (Health Leader)

All 3 focus group participants held strong perceptions and acceptance of the significant role assigned to Adam in the garden of Eden, considering it as an initial

indication of the importance and relevance of PA for humanity. Moreover, they emphasised the prominence of PA in the lives of the children of Israel as depicted in biblical accounts. The extensive walking undertaken by the Israelites in their daily lives and throughout their journey from Egypt to Canaan was seen as a demonstration of the vital role assigned to PA in their lifestyle.

“The first exercise programme ever was that of the children of Israel walking for 40 years... the bible said that their foot did not swell, or their shoes wore out.” (Health leader).

It was observed by the participants that although the biblical text provides minimal explicit guidance about PA, the principles of maintaining such health habits are perceived as a means for Adventists to honour and glorify God through their bodies. This includes active engagement in practices such as PA, which have a positive impact on the physical well-being of individuals. Furthermore, participants noted that according to biblical references such as 1 Corinthians 3:16 and 1 Corinthians 6:19, the body is regarded as the temple of God.

“The Bible doesn't talk that much about physical exercise. And then we have Ellen White... most of the work is centred around food and diet, which I think you know, the church tends to take that on board, there is some mention of physical exercise.”  
(Pastor)

However, despite this scriptural context, the participants discussed a perceived disassociation within the collective mindset of the church between spiritual activities and PA. They observed that these concepts or behaviors are often viewed as separate entities, failing to recognise their inherent harmony and the responsibility to care for one's body. Additionally, it was highlighted that there exists a misinterpretation regarding the biblical text stating that "bodily exercise profits little." One health leader clarified that this refers to the prioritisation of one aspect above the other, rather than negating the role and positive impact of PA in one's life. The participants further discussed the prevailing view that EGW's guidance on health tends to heavily focus on food and diet, exacerbating the perception of a disparity between her teachings and the significance attributed to PA within the Adventist church.

Another notable observation raised during the discussions was the concern surrounding the perceived dominance of dietary aspects within EGW's writings in the context of the Adventist church. However, the participants were keen to point out that the primary issue lay not in the content itself, but rather in the methodologies and strategies employed by the church to promote healthy habits. They identified a tendency to misapply guidance and inspired writings, thereby overlooking the holistic construct of the health message advocated by the Adventist church.

Given these considerations, one pastor reflected on the importance of fostering open and inclusive discussions on health promotion, specifically addressing the role of PA, in collaboration with health leaders actively participating in the focus group session.

This collaborative approach was deemed crucial for rectifying potential gaps in conceptual and contextual understanding of biblical principles and the guidance provided by EGW.

“Sometimes we use scripture to our own advantage or disadvantage, as the case may be...the scripture that says body bodily exercise is of very little benefit in a way we are twisting the text...What the Apostle Paul was saying is that if that's all you're doing, that's not going to profit you, that's not going to get you to heaven, that's what it means... It didn't mean that exercise is not profitable for the body... so that's a misinterpretation of the text”. (Pastor).

A topic of considerable discussion among the leaders was the acceptance and interpretation of EGW's writings, which appeared to be influenced by the ongoing debate surrounding their relevance in the modern era compared to the time they were initially penned in the 19th century. These leaders engaged in deliberations regarding the extent to which her writings should be considered applicable and suitable for the present context, subsequently shaping their understanding and utilization of her guidance.

“So historically, the nineteenth century is vastly different from ours... EGW did not write about going to the gym and playing sport...but when you read her writings when you read the historical books, PA was important to the Adventist community back in the nineteenth century.” (Pastor).

During the focus group discussions, one pastor drew attention to an intriguing aspect of EGW's teachings. He stated that she not only provided guidance on health lifestyle habits but also encouraged the Adventist church to remain receptive to newly developed knowledge in the field. This perspective reflected her recognition of the evolving nature of scientific understanding and the need to integrate emerging principles into the existing framework she outlined.

The pastor highlighted that EGW's teachings exhibited a forward-thinking approach, acknowledging the relevance of futuristic issues that would require the integration of new principles she had outlined. It showcased her appreciation for the ever-evolving scientific landscape and the need for the church to adapt and incorporate newly developed knowledge into its understanding of health practices.

"I think EGW was more futuristic than most of us would even imagine. And she would say thank you that more knowledge has been given, and that you should go with the knowledge that has been given by science, as long as it's not in contradiction to the Bible, and to the Word of God." (Pastor)

This emphasis on embracing new knowledge resonated with all focus group participants, as it reflected the importance of remaining open to the advancements in the field of health. Participants believed that it demonstrated EGW's foresight in recognising the significance of integrating evolving scientific principles and concepts into the holistic health message of the church. Participants also indicated that, by appreciating the relevance of newly developed knowledge, the church can effectively

navigate contemporary health challenges and continue to promote a balanced and healthy lifestyle rooted in biblical principles and the guidance provided by EGW.

“I still believe that what she said is very, very relevant... when you read ministry of healing or anything she says on health, you look at the principles you don't look at what was done in the 19th century... What are the principles here that we should make relevant to the 21st century? I see loads of things, many, many things... we need to reflect and sit down and say what are the principles? Are we following these principles?... we had this message long before the world knew about a lot of the stuff”.  
(Pastor).

The participants in the focus group discussions exhibited a nuanced perspective regarding the transferability of health teachings across different eras, as articulated in the Bible and by EGW. Rather than dismissing the notion outright, they emphasised a potential inhibiting factor: the dissemination of information. This factor, which encompasses the transmission and comprehension of relevant knowledge, was identified as a critical influence on the acceptance and understanding of both the textual and contextual dimensions of health teachings. The participants recognised that effective dissemination of information plays a vital role in bridging temporal gaps and facilitating a general grasp of the principles delineated in the Bible and expounded upon by EGW.



“It's quite possible that those writings and the understanding of them have spilt over into our modern-day society, but it's sort of distributed in a way that doesn't really make it fit when you consider the way that our world is now shaped”. (Health Leader).

Within the focus groups, pastors and health leaders voiced a shared need for greater clarity and precise definition of the foundational concepts underlying the health principles found in biblical texts and the writings of EGW. They recognised the importance of a broader understanding of these concepts to facilitate effective health promotion efforts, particularly in relation to PA.

The interpretation of the biblical context plays a crucial role in shaping individuals' perspectives on the relevance or irrelevance of the concepts being discussed. It is important to recognise that the interconnection between the Bible and the writings of EGW within the Adventist church is firmly rooted in the belief that the health message advocated by the church is derived from the scriptures (Galvez, 2017). Consequently, a misinterpretation of the biblical context can potentially undermine the perceived significance of EGW's complementary writings.

The participants in the focus groups highlighted the existence of a symbiotic relationship between the Bible and EGW's writings, dating back to the early 1800s. This partnership reinforces the coexistence and interdependence of diet and PA as integral components of the health message within the Adventist church. The understanding and interpretation of one source, such as the Bible, significantly influence the perception of the other source, namely EGW's writings.

By delving into the scholarly and scientific exploration of this mutual relationship between diet and PA, pastors and health leaders, researchers can gain deeper insights into the synergistic nature of these concepts. This rigorous approach not only enhances better comprehension of the health message but also enables more effective health promotion initiatives within the Adventist church. By recognising the inherent interconnectedness of diet and PA, as guided by both biblical teachings and EGW's writings, the Adventist church can strengthen its capacity to promote holistic well-being and encourage adherence to a balanced and healthy lifestyle.

“When you look at diet and exercise, they go together because when you read EGW tells us that for you to have a good digestion or for you to have good mental health you need to go and exercise just walk for 10 minutes after having food”. (Pastor & Health Leader)

The interplay between [mis]interpretation and relevance highlights the importance of understanding their partnership within the context of the Adventist church. Notably, the existence of a gap between pastors and health leaders in terms of conceptualization and systematization of the health message reflects a broader issue within the church structure.

Recognising the need to address this systemic issue, participants in the focus groups emphasised the significance of education and transparency in fostering a balanced and contextualized understanding of the principles outlined in scripture and EGW's books. This educational approach should encompass not only the general

membership but also the leaders of the church, promoting an interdependent method of learning that bridges the gap between the interpretation of biblical dictates and the guidance provided by EGW.

“So is here where education is needed... education is also needed to avoid stigmatisation and also to avoid differences and foster diversity.” (Pastor & Health Leader)

Several participants in the study expressed a significant oversight or lack of recognition regarding the presence of explicit scriptural passages that highlight the significance of incorporating PA into one's lifestyle and assuming personal responsibility for one's health. This finding implies a tendency to overlook or underestimate the relevance and importance of specific biblical teachings that emphasise the value of engaging in PA and taking proactive measures to maintain well-being. This oversight may hinder a thorough understanding and practical application of the biblical principles related to health and PA within the context of the Adventist church.

“He also has told us to walk because he has told us in Micah that it is told what is good, to love mercy, to act justly and to walk humbly with your God. So, we know already what to do and I think instead of coming up with yet another advertising campaign, I think it is time to go back to the basics and to find out what is it that God wants of us.” (Health Leader)

Moreover, participants highlight the interdependency between the physical and spiritual realms, affirming their inseparable connection within the biblical context. They

emphasised that both domains are intricately woven throughout the narratives presented in the Bible, albeit acknowledging that comprehending the contextual nuances of certain passages may require dedicated study and contemplation. This recognition of the interplay between the physical and spiritual aspects of human existence resonates with the holistic perspective that underlies the Adventist understanding of health and well-being (Galvez, 2017).

“PA is to the health message; what prayer is to spirituality” (Health Leader).

The participants actively expressed their commitment to addressing the issue of misinterpretation and promoting a more accurate understanding of the scriptures and the writings of EGW. They engaged in open and constructive discussions, sharing their perspectives, insights, and concerns. Their active participation and contribution to the dialogue demonstrated their shared dedication to rectifying the existing challenges and seeking a clearer and more scholarly approach to interpreting the texts.

“What we need to do is change the structure and change the whole mindset... we really need to make a conscious effort to create change from the top down...” (Health Leader).

According to the insights shared by the participants in the focus group, there was a general consensus regarding the necessity for a paradigm shift and an approach that fosters a broad spectrum understanding of Biblical theology as it pertains to PA. It was acknowledged that embracing such an approach would not only enable a stronger connection and integration of PA within the framework of Biblical teachings, but also

reshape and strengthen the collaborative partnership between pastors and health leaders, thereby maximizing their collective impact on matters of health promotion within the church (Gross et al., 2018).

Furthermore, the participants recognised the existence of various resources and avenues within the organisation that could be effectively utilised to drive the desired change and facilitate the necessary transformation.

“I think we need to take advantage of there are two things that you can't ignore with our church. It is the issue of structure and who you are or your position... this is how difficult it is to change things in this church unless you're positioned.” (Pastor and Health Leader)

Consequently, the consensus among the participants was that effective change can be realised by leveraging leadership positions within the organisation to enact transformative actions and cultivate a culture that promotes a positive attitude towards PA. By utilising their influential roles, organisational leaders can lead initiatives and implement strategies that foster an environment conducive to embracing and prioritising PA.

## 6.2.2 Theme 2

### **Cultural Barriers to healthy exercise**

The consensus among the study participants indicated that the promotion of healthy lifestyle habits, including PA, within the church community faces significant challenges attributable to a systemic cultural element. This cultural context extends

beyond an individual's identity based on ancestral or geographical factors, although it is widely acknowledged that cultural identity plays a role in determining health outcomes. Notably, the organisational culture within the church is also influenced by prevailing attitudes and behaviors that have been accepted and embraced. These factors collectively shape the approach to program implementation and the dissemination of information, particularly on the Sabbath, within the church.

“You might find that when we look at a church setting on a Sabbath day, exercise is seldom mentioned... I think it also bleeds into the fact that we only ever see each other on the Sabbath, and therefore breaking bread together is the only thing we can do together.” (Pastor and Health Leader)

The participants in the study recognised that the worship service within the church community inadequately promotes motivation for members to engage in PA . It was observed that a significant portion of the worship service predominantly involves sedentary behavior, with attendees largely seated throughout the duration of the service. This sedentary nature of the worship service may impede opportunities for individuals to be physically active during church gatherings.

“For example, all our meetings we are sitting down, we have board meetings we're sitting, we have camp meetings, we're sitting. We're sitting in Sabbath School, in our sitting for potluck, we're sitting in divine service...So what we need to do is change the structure change the whole mindset.” (Health Leader)

The insights obtained from the focus group participants shed light on the presence of a widely acknowledged organisational culture within the Adventist community, which fosters an environment that heightens the susceptibility of church members to noncommunicable diseases, particularly obesity. This prevailing culture significantly contributes to the increased vulnerability of individuals within the church community to the development of such health conditions.

However, it is noteworthy that pastoral and health leadership within the Adventist church also express frustration due to the delicate nature of addressing the stigma associated with body image. This issue has become an integral part of the challenges faced by the church, considering its rich cultural diversity within the BUC. Given the diverse cultural groups represented within the Adventist church, it is essential to approach health promotion, PA, with a high level of cultural sensitivity. Each cultural group may have distinct concerns and specific considerations that must be considered. Understanding and addressing these unique perspectives and concerns are crucial for designing targeted and effective interventions that respect the cultural backgrounds and meet the specific needs of each group within the church. . The multifaceted cultural landscape warrants an approach that effectively addresses these challenges and caters to the unique sensitivities surrounding health promotion within the church.

“Nowadays, we are so sensitive, because a person who is big will look at another person who is big and say, well, I'm not actually big... We have a problem with image

and that feeds into this idea of exercise where walking is okay, but anything else might not be okay.” (Pastors).

The consensus reached among all focus groups underscored the imperative for a method of approach concerning PA that encompasses the clear identification, definition, and sensitivity towards the diverse demographic composition of the church. It was emphasised that this approach should account for and address the varied demographic characteristics prevalent within the church community, including cultural backgrounds, beliefs, and practices. By adopting such an inclusive approach, the implementation of PA initiatives can be tailored to align with the specific needs and preferences of church members, thereby optimising their engagement and effectiveness.

“So, we would also have to kind of package and define when we talk about exercise, what is it are we talking about...and what outcomes are we trying to achieve.”  
(Health Leader)

Several pastors expressed apprehension regarding the discussion of PA or exercise within the church, citing concerns over potential resistance attributed to both a prevailing culture of resistance and the influence of political correctness. These pastors voiced fears that addressing these topics may encounter significant opposition within the church community, thereby posing potential barriers to the advancement of health promotion initiatives centred on PA.

“We have a situation where you cannot tell anyone what to do. You can't. So that's one thing. It's not a simple answer, because even if you were to stand from the



front and say a brother we need to or we should do this. Some of the comments would be "Who are you to tell me what to do?" (Pastor)

"I want to jump on what you said, it is a culture that we can't tell people anymore what to do that is true. I 100% agree with that because it's an egg dance either you leave yourself out the window too far to the right and you bring rules and regulations that are too strict or you're in, yourself, too far out of the left window and you are too liberal." (Health Leader)

The participants also felt that there was a distinct difference in how one viewed body shape and sizes within the church. One leader compared body image and sizes between those in eastern Europe and those in western Europe such as the UK. Those in Eastern Europe were considered by participants to be in better body size proportion and fitness compared to those in the UK.

"If you compare the Pathfinder in Europe, when we go to Master Guide camps, you know, our contemporaries or we go to the Trans-European Division (TED) camp, and you compare our leaders and European leaders. European leaders are skinny people. They are the ones who are boating, rowing, climbing hiking." (Pastor)

There was also comparison made about the way churches function in general in other European countries by a pastor who was originally from another European country highlighting the possible need for churches through the leaders to begin to adopt similar approaches.

“You go to an Adventist church in Slovenia, and it is on a small mountain...and say, can we run a camp for you? It's hiking up in the mountain. And then the highlight of the camp is that you can sleep outdoors under the open sky and drink the water from the river.” (Pastor)

Equally, another pastor from a country in Central Europe reflected on his time back in Italy and how much more active he was as a member and leader of the church, which contrasts with his routine and church style in the UK.

“I'm originally from Central Europe so my experience as a pathfinder and a pastor was a very active one, so, I wonder whether it comes down to possibly culture.” (Pastor)

However, health leaders shared that, given that the church is very culturally diverse, there are a variety of approaches that one may need to appreciate when addressing the issue of body image and political correctness. One study showed that body image or body dissatisfaction is more prevalent among adult women in church settings, but few religious organisations provide suitable and appropriate interventions to support church members (Blomquist et al., 2021). However, participants expressed their struggle to adequately address the matter which is a significant challenge and barrier to impacting the church on health principles, not least PA.

Participants discussed what they thought was of great necessity considering the revelations surrounding the stigma of body image specifically, but also the influence of culture on the way they worship.

“So here is where education is needed... Education is also needed to avoid stigmatisation and navigate the differences that exist and to foster diversity because diversity is encouraged. It is a good thing. But that means we also need to accept that body images differ over different cultural backgrounds.” (Pastor)

There was general disquiet among participants regarding the number of overweight cases in the church when contrast with the Adventists’ health message or teaching.

“If you see our health message and the percentage of people who are overweight in church, it's unbelievable...It's just you know, by nature, we're very lazy.” (Pastor and health leader).

Several participants acknowledged their role in influencing the motivation to be physically active and engage in exercise through adjusting the culture within the church by internalising the concepts and health teachings that they would need to demonstrate to the church. Participants recognised some of the organisational challenges that persist, and the selection process associated with health leaders who are predominantly volunteers as an area that may need reviewing. This internalisation of health principles relative to cultural identity within the church is imperative to ensure a tailored, methodical, and systematic approach is demonstrated. Additionally, participants pointed out the various segments of health initiative within the church that function independent of each other but would be of greater benefit if there was synergy.

‘What we can do is lead by example. And we can lead by example and make things right for ourselves and make things right with our Creator. And then, we hope, we will radiate the message that we are supposed to teach’. (Pastor)

‘There are also several camps in the Adventist Health message, there is the vegan camp, the vegetarian camp, the flexitarian camp, we also have the medical missionary camp which are very good because they all lead in the same direction, which is a healthy lifestyle and longevity, but at the same time, unfortunately, those camps sometimes don't last long’. (Health leader)

‘I think within our churches, for whatever the reason, perhaps it's because we don't have anyone else, we elect people who should not be elected to be the health leaders. Because they are not the best advertisement for the health’. (Pastor)

Although these salient self-assessments were highlighted in the focus group discussions, one health leader felt strongly that the culture of only seeing and fellowshiping (friendly association, especially with people who share one's interests) with each other on the sabbath might also require a mental shift whereby, fellowshiping occurs during the week also, doing things together apart from church service, such as PA or a fellowship exercise.

‘I think it also bleeds into the fact that we are we only ever see each other on the Sabbath, and therefore, breaking bread together is the only thing we can do together...whereas if we made it a habit to see each other in the week, we could

arrange, say, okay, we're going to go for a run...I still go back to practice, because I don't believe there's any way, we could teach this'. (Health Leader)

An indelible part of the Adventist organisation is the meeting together to share lunch or potluck immediately after church services on the sabbath (Saturday); this is another form of socialising with each other. Hence, the thought reverberated within the focus group discussion about having a similar approach to PA and exercise, that by being active they can have fellowship also.

'We dwell on food, and it's all about dinner, we come and share vegan recipes and vegan cakes and all that, so if we could transpose that same type of template into PA and say, well, why don't we physically be active together? (Health Leader)

However, participants recognised that while such mental and organisational change is needed, the answer is not as simple as planning a PA fellowship meeting during the week. Some participants felt that a methodical approach was required to change the cultural fabric of the church in relation to PA, together with an effective policy and framework. Such policy and framework were seen as integral factors when journeying with members and other leaders within the church when considering a change of ideology and philosophy about PA.

'It's about perspective, we gradate certain sins. This one is bad, and that one is not. We've done it with the wellbeing and exercise... the perspective needs to change the narrative that we tell. We need to present it more as a holistic package. That your

body, your temple of God, which means that we must look at our exercise and what we do with our body and how we care for it'. (Pastor and Health Leader)

Pastors reflected particularly strongly on the fact that their work is often extensive in the various commitments they engage in and are expected to engage in. Although pastors accepted that organisational and cultural adjustments begin with leadership, they were less accepting of the value the organisation placed on work ethics.

'I was now entering an organisation [Adventist] that did not value hard work but favoured excessive work. So that was a bit of a shock'. (Pastor)

Therefore, the view among the focus group participants was that to demonstrate a practical and applicable change in church culture, strong sustained support from the top is necessary. The idea of a support mechanism from the parent organisation was of keen interest to all participants who felt that support does not necessarily mean interventions but the opportunity to have a time and space to engage in personal care such as PA.

'We don't have enough protected time... I have spoken about protected time for ministers and health leaders, and for when we do our sessions and our field leader meetings that we implement, MOTs, because when we have done MOTs in the past, that's where we found a lot of medical problems among our leaders... we discovered several people who are diabetic, high cholesterol and hypertension who didn't know they had those conditions.'. (Health Leader)

According to participants, attempts have been made by the South and North England conferences to encourage pastors specifically to have PA as part of their daily routine. Both conferences, (the North England conference being the most recent) had recently made available financial incentives of up to £400 per year for pastors to be able to sign up to local gym or exercise facilities in the community. However, while this was welcomed, it is not clear how many leaders use the incentive to attend the gym, and the issue of protected time for pastors to be able to access the gym, given the incentive to do so, has not been implemented.

The participants unanimously stated that the offer of an incentive for gym membership can only go so far, but without a protected time to do so, it will only remain an option that is available but not effective. It was the view of the participants that due to the many factors that contribute to the increasing incidents of burnout among pastors specifically, there must be a scaffolding in place to assist and empower leaders to better engage and integrate PA within their lifestyles.

‘ It would help ministers take advantage of what's being offered and cascades down, because members will then recognise that their minister is very serious about his lifestyle’. (Pastor)

There was a strong interaction among focus group participants about the diverse make-up of the leadership within the church which they felt requires a flexible yet uncomplicated approach from the top-down. It was suggested that one way to address the culture of avoidance related to the health of pastors and health leaders is to

facilitate such discussions at the various leadership meetings, given the connection with health and the gospel that they preach.

‘What they need to do is whenever leaders meet to do a development plan, where you say oh, you want this goal and that goal? Part of it should be my personal development is my health and wellbeing. I would like time to go to the gym. I would like MOT I would like to be referred to Bupa for example. You put that down on your personal development, because you need to increase in stature and favour with God and man as well. Like, physically, physiologically, mentally’. (Health Leader)

Similarly, some pastors shared their experience of other pastors who they witnessed attempted to preach about health and PA but lacked the credibility to affect change because of obvious comorbidities, and because the culture of the church seems to accept that as part of who we are. This does not negate the awareness that folks may have, but it shows a lack of application.

‘We have a minister at our conference, an excellent minister, but whenever he talks about a healthy lifestyle, no one listens and the only reason is because he is overweight, so it seemed to contradict what he was trying to say, and this is why we must embrace it. If we are models of healthy lifestyle, members will embrace what we say and follow.’ (Pastor)

‘We are more aware of health and awareness since the pandemic, etc. So, when you break down to the common denominator of exercise and PA and ask people what they do, you find that that is one of the areas we fail in.’ (Pastor and Health Leader)



Indeed, one of the challenges leaders and their congregation faced regarding attitudes and behaviour towards PA and exercise, is the systemic divide within the organisation regarding the fundamentals of Adventism and the Adventist identity. Participants felt it pertinent to address this issue because they felt, collectively, they had lost sight of the understanding of the central pillars of their faith.

‘ This is the basics, this is our fundamentals, it comes across as if we're trying to bring something new, whereas actually, we're trying to go back to our origin our basics and so, the big issue we have is not trying to package and sell the benefits of exercise and how to live, we're actually trying to educate our churches about our purpose and focus...it's part of the Adventist identity and we need to be aware of that...When you say the right arm of the gospel, I like that because it's true, that arm has been amputated’.

(Health Leader)

Conceptualising the gravity of the current condition of the church regarding PA as one aspect of the health message, which relates to Adventist theology, was recognised as uniquely mountainous challenge. Participants felt strongly that due care and diligence has not been given to inculcate the church membership on the importance and relevance of what makes the Adventist distinct in its teachings and application of health principles.

“We're not starting from a position of people who don't know, I don't think that's the premise, the challenge that we've got is we've lost our sense of identity and

purpose. That's what we've lost over the years, it's just become so confused, and opaque.” (Pastor)

“The problem that we have with the health message is we have allowed members to take a leaf and move around in churches saying that this leaf represents the forest and people forget that in a forest there are 1000s of leaves that are there, but somebody carries one leaf.” (Pastor)

Reference was made to illustrate how transferable the method of doing other aspects of church activity from the early Adventist pioneers, shaped the way they viewed the church’s attitude towards PA and exercise.

“I think as a church now, there are so many issues that we are struggling with, whereby mistakes were done, when the gospel was being taken overseas by the missionaries...and sometimes as Adventists we make health the religion and health is not the religion...the religion is the religion.” (Health Leader)

According to participants, historical analysis of the church revealed a noteworthy pattern in the early Adventist approach, where careful selection of demographic locations was undertaken to strategically serve the community. This deliberate selection process ensured that the established facilities aligned with the core beliefs and philosophy of the Adventist church. This strategic alignment was understood by participants to potentially facilitated the integration of health promotion initiatives, including PA, by providing accessible and appropriate resources within the community. Understanding this historical pattern contributes to a systematic understanding of the

contextual factors that have influenced the health promotion efforts of the Adventist church, specifically in relation to PA.

“Every time when you read historical records or kind of articles about setting up another church and other school, especially universities, they tend to be built on a piece of land where the students can work physically and exercise. Different kinds of exercise. Let's call it that way. mostly related to work, physical work.” (Pastor)

Then, there was the seemingly problematic issue of transitioning from the way people connect with each other in the infancy of the church compared to post-modern era, suggesting that things are different, but the church has not transitioned with the times we are living in.

‘If we go back over the last 10,20, 30 years, we have seen a difference in people's lifestyles, and lifestyles and society has changed, it is more solitary’. (Health Leader)

Focus group participants highlighted the point that when leaders begin to embrace the philosophy of the health message through strong and sustained support from the top down, the church will better understand that at its core, leaders are not only aware of the health principles, but are wanting to take the necessary steps to address this organisational issue which permeates throughout the wider church. The participants believed the negative outlook on healthy lifestyle habits associated with church leaders has created the current culture of stigmatism among members and leaders alike.

“I learned that when leaders embrace the values of the organisation, such as healthy lifestyle habits, the followers embrace it too and follow what those leaders do...and a good leader embraces all the values of their organisation, and I don't think health or PA has been embraced to the level it should be.” (Pastor)

The leaders in the focus groups reiterated their reflection that the culture of any organisation is shaped by its leader and as such change begins with themselves.

### 6.2.3 Theme 3

#### **Need for accountable and empowered leaders.**

Participants were willing to discuss and acknowledge what they thought was one of the aspects that contributes to organisational change or interdepartmental adjustments, that of accepting or taking responsibility for the seeming lack of enthusiasm within the church to be more physical active or engage in exercise activity.

“When leaders embrace the values of the organisation, such as the health principles, the followers embrace it too, they will do what leaders do. And a good leader embraces all the values of his organisation, and I don't think health has been embraced to the level it should be. (Health leader)

It was said that leaders should take responsibility for their attitude toward PA so that a positive impact can spread throughout the church. This element of accountability is evidently weighed in the balance, both from the moment a pastor is officially

welcomed and orientated by the respective conference employer and the independent functioning of the health leaders and health department.

‘If our leaders, our pastors, get on board because a lot of our members look towards their leadership, and if they get on board with it, could you imagine the influence’. (Health Leader)

Therefore, the element of accountability is both to oneself and to the members of the church, according to one participant. Participants also felt that the first part of accountability is to the individual leader, then to the church, however, if the initial attention is not taking personal accountability, there cannot be effective accountability to the wider church.

‘I think there are several strands, the modelling, the incentivising, but also the personal accountability. do you not know that your body is the temple of the living God? We need to bring it home’ ... your health is your responsibility’. (Pastors)

Participants also discussed the need for leaders to be empowered to take responsibility for their health and that of the church they lead, which they believed sends a clear message that reflects the biblical teachings of health and positively influences the members of the church.

‘So, what we need to be also highlighting personal responsibility, and that is an act of service to God, to care for our bodies’. (Pastors)

The empowerment of the participants was also seen by them as a key component to being accountable to themselves as leaders and to be held accountable

for health behaviours related to PA, as a pastor boldly informed other participants in the focus group about his approach to accountability.

‘I have no problem telling my members, please don't call me between 10 and 12 noon because I'm in the gym. Okay. And what message does that send? It does not say that all pastors are lazing around in the gym. It says that the pastor is very serious about his health. (Pastor)

However, such an approach was described by participants as courageous and perhaps would not expect a newly qualified pastor or health leader to set out such boundaries to their church members. This is why the element of empowerment of leaders must also be courageous enough to set boundaries or, as previous themes indicated, the need for protected time so that leaders can engage in PA. In fact, EGW in one of her earlier compiled letters to ministers in the church said that a pastors work is exhaustive and must be balanced with adequate rest and PA , which stimulate both mind and body, resulting in optimum relief (White, 1946).

'Perhaps we are afraid that members might misinterpret our time in the gym as lazy, you know, or we can do better things with our time, like Bible study, you know, or giving out religious leaflets. But we should not be afraid to say that I am taking my health, my lifestyle very seriously. I am not sorry. This is what I do. And I would encourage you to do the same thing. And that's why I have the authority to encourage my members to look after themselves, you know, to take their physical wellbeing seriously'. (Pastor)

Due to the voluntary make-up of health leaders at the local level, there accountability was discussed because they were not seen to be held accountable for the role, they play in influencing the church to be more physical active. Similarly, pastors were not expected to lead health initiatives, although their involvement was considered critical to the success of any church program to achieve the desired result.

‘When was the last time we heard a health leader or pastor preach on health, such as exercise?’ Healthy lives Healthy Living unless it was a campaign’. (Health leader)

Such messages from the pulpit, according to participants, were said to be very sparse, a result of systemic inhibitions within the church's leadership. In relation to health leaders, the participants discussed the steps a pastor can take to stimulate confidence in the church through health ministries.

‘Now what a pastor can do is empowerment, right? Making sure that there is a health leader in the church and empower them to say, you know what, build your team, have that team represented in the church board. Make sure you know that the health leader has his place in the worship service, make sure that he has all the resources that he needs, and support him in the leadership of whatever he is doing’. (Health Leader)

Most within the focus group sessions agreed that empowerment as a concept is transferable and that it should begin with the leadership who themselves are empowered to do the same church members to take responsibility for their health.

‘This is what we are supposed to do because, you know, in the end, we are trying to educate the membership and empower them... Empowerment means giving them

the responsibility to act, themselves... Of course, we must start from the top to start implementing, but implementing through empowerment'. (Health Leader)

In the focus group 3, there was effective brainstorming as the session continued, as participants thought that perhaps the initial phase of change and empowerment can only be expected from the top.

'I think this is where it starts. If we do not encourage this from the top down, then how can we expect and how can we put the onus on the membership or on the broader public to say, you should do more exercise or be more physically active?'

(Pastor)

'And we really must break this down consciously and make a conscious effort to break it down from the top down' (Health leader).

'What we can do is lead by example. And we can lead by example and make things right for ourselves and make things right with our Creator. (Pastor).

Although most participants said they had great difficulty balancing their role with influencing the attitude of the church towards PA, some felt that leaders do exercise. A pastor may typically have 3 to 4 different congregations, most of whom may need some element of pastoral care. It is no wonder that members have the view they have about leaders. Furthermore, some admitted that while walking as part of an activity, leaders can still be preoccupied with what is considered the most religious task.

'If pastors had the time to go jogging with church members, they would do that. But then stretch them over several churches and many church members and several



churches with hundreds of church members, many church members just don't see it... Just because there is a massive amount of people to care for. (Pastor).

'Believe me pastors exercise and go on their walks, but while they walk, they make all their phone calls... When I am doing my exercises, whether it's walking or cycling, it's genuinely like working as well at the same time I'm taking calls, my mind is processing things on my to-do list'. (Pastor)

Further discussions specific to pastors surfaced and participants talked about the time constraint pastors are faced with, which was seen as a catalyst for the fear that some may have or the lack of accountability, which is an important characteristic of a good leader.

'So, there are some pastors who just won't say, they go to the gym, for fear of being accused of living in the gym... It's trying to lead by example. But it is a big mountain we must climb.' (Pastor)

In view of this, focus group participants discussed the potential impact should the General Conference (GC) of Adventist invest more time and effort in developing the local churches to take the necessary steps toward a change in attitude and availability to engage in PA. This is also necessary to address the results shown by studies on the rate of burnout among leaders, specifically pastors (Frederick et al., 2021)

'From the General Conference coming down, they can rally the health department and the directors, etc., just to put a little more emphasis on the physical

side of the health message... all it would take is to get someone at the GC level to agree with it, and I guarantee it will be at the next sessions.' (Health Leader)

Provided that such attention is shown by the GC to place greater emphasis on PA through leadership and health promotion methodologies, there remained strong reservations among leaders regarding the mindset and attitude of church members toward PA.

'I start from the premise that my members are very intelligent people. That's my thought. They're intelligent, and because of that, they are making informed choices. And one of those choices is simply that they don't want to exercise... It's not that they don't understand the benefits or the need to exercise, it's simply that they don't want to do it because it takes effort.' (Pastor)

So, while focus group participants embraced the idea of accountability and empowerment, they felt it was not enough that leaders embrace this but that members too have a responsibility for the upkeep of their body just as much as the leaders. They [participants] thought it imperative that members also understand that each is responsible for his or her own body and the way in which they cared for it, ultimately giving glory to God. The leaders felt that because of this lack in personal accountability across the board, the very fabric of the Adventist organisation and the health message is perhaps compromised and as such threatens the very identity of the church.

'It's part of the Adventist identity and we need to be aware of that... When you say the right arm of the gospel, I like that saying because it is true that the arm has been

amputated. It has been taken away from us, we don't view our health as a message anymore'. (Health Leader)

Given that leaders felt that the very identity of the church, which is fit together in its theology, doctrine, and health teachings, is affected by leadership accountability and empowerment, as well as individual accountability among church members, a reference was made that when one leader took accountability for his health and made very notable changes in his habits and attitude toward PA, the result was inspiring and motivated others to do the same.

'We should never undermine the importance of a role model. I think you all know pastor..., When he lost weight, that thing made headlines. And he impacted a lot of people. So it is one area where people who carry power, who are well positioned, especially ministers, the way we impact young people in our churches...We may not see some of those things and some people may not come and confess to us, but believe me, things that we do as leaders, we are role models. (Pastor)

Such examples of being a role model of health and taking accountability especially as a leader were also highlighted by participants as a direct application of one of the Adventist's fundamental beliefs which many might have somehow forgotten.

'Taking care of our bodies is one of our fundamental beliefs, but we have let it go...and if you study the Spirit of Prophecy, it talks about physical exercise, it is loaded, but we no longer appear like we have all these things'. (Pastor and Health Leader)

One of the compelling moments of the focus group discussions were personal testimonies of leaders facing up to their admittedly questionable credibility (absence of accountability and empowerment) and in some cases a complete lack of credibility, while those who professed a lifestyle that involves PA openly shared the benefits, they experienced of living an active lifestyle and their call to leadership.

'If it weren't for physical exercise, I could not have done ministry. Okay. Just simple fact. Last year. I had to take a year out from tiredness and burnout, right. Factors that came up in that is that I had sort of slacked a little bit on my exercise... I reintroduced it and finding a bit more balance has changed. So, I have always exercised, it's really part of my day. There is no way I could do ministry without physical exercise.  
(Pastor)

Such was the way that some leaders felt that living an active lifestyle is not only beneficial to the individual, but it reflects that level of accountability and duty that one has both to God and the people they lead.

### 6.3 Interim Conclusion

The focus group discussions unveiled some key factors that may have contributed to the tensions that exist within the Adventist church in the UK regarding attitudes, behaviours, and integration of PA within its doctrine or theology and lifestyle. Both pastors and health leaders are not ignorant of these challenges within the church, and are generally concerned about their health habits, their church members, and the image they portray in modelling the health principles that know and believe in. Studies

have shown that when pastors or health leaders model the philosophy of the church and its programs with support, there is greater self-efficacy toward PA (Bernhart et al., 2021b). Such support was a key element that was discussed in the focus groups, and leaders held the parent body for the church accountable for at least two dimensions of support, instrumental support (providing physical infrastructure and service) and appraisal support ( opportunity for self-evaluation).

Interestingly, both pastors and health leaders are lacking in confidence to affect the change they saw was needed, primarily due to systemic factors that were not being addressed from the top down. Based on the data and the perceptions of the participants, it becomes apparent that targeted efforts are necessary to educate Adventist leaders and church members on the core fundamental beliefs regarding PA in the context of Adventism. The findings indicate that leaders themselves need to undertake specific strategies and initiatives to effectively disseminate this knowledge.

To address this need, participants from all focus groups reflected on the potential implementation of leadership training programmes, focussing on equipping Adventist leaders with evidence-based knowledge and skills to promote PA within their congregations. These programmes should incorporate scientific and academic insight into the health benefits of PA, encompassing its positive effects on physical, mental, and spiritual well-being. By providing substantiated information, leaders can facilitate a deeper understanding among church members about the significance of PA within the Adventist framework.

Additionally, leaders establish and facilitate open discussions and workshops, which may encourage participants to explore the theological and philosophical foundations of Adventism in relation to PA. These forums can foster scholarly and scientific discourse, helping people understand how PA aligns with Adventist beliefs and emphasises the concept of holistic health, where the body is viewed as a temple to be preserved and cared for.

Furthermore, collaboration between leaders and health professionals, such as exercise physiologists or nutritionists, can be crucial to fostering an environment within the church setting that empowers the wider church community to better engage in PA (Smothers et al., 2021; Wang et al., 2022). This alliance enables the delivery of accurate evidence-based information to church members. By incorporating the expertise of these professionals, leaders can provide clear and scientifically supported guidance on integrating PA and exercise into one's lifestyle. Such collaborative efforts enhance the credibility and reliability of the information disseminated, engendering trust, and motivating active engagement.

Importantly, church leaders can adopt a multifaceted approach that combines educational initiatives with practical demonstrations. This may involve organising PA events, exercise classes, or outdoor recreational activities within the church community (Burgest, 2022; Kinney, 2018). By creating opportunities for hands-on experiences and direct involvement with PA, leaders can facilitate a deeper comprehension and appreciation for its significance within the Adventist faith.

In summary, drawing from the data and participants' perceptions, targeted efforts are necessary to educate Adventist leaders and church members on the core fundamental beliefs pertaining to PA and exercise. Leadership training programmes, open discussions, collaborations with health professionals, and practical demonstrations are effective means to convey the importance of PA within the Adventist context and to encourage its integration into the lives of church members.

## Chapter 7 Discussion

### 7.1 Main findings from study 1: Uncovering Health Promotion Practices within the Adventist Church Through Semi-Structured Interviews

The semi-structured interview study findings reveal important insights about health promotion within the Adventist church. Participants perceive health and wellness promotion as a core belief of the Adventist religion, to be shared with the wider community. This is in line with both the Adventist's Mission philosophy (General Conference of AdventistWorld Church, 2023a), and the abiding guidance from EGW (White, 1894a, 1897a, 2016b, 1923). However, there is an overwhelming emphasis on nutrition within the Adventist church compared to PA. This limited emphasis on PA hinders the knowledge, importance, and acceptance of the broader holistic content and context of the health message.

Some participants felt that health leaders should indeed prioritise PA, and that having a health-related background would further enhance their credibility in addressing health-related matters within the church. In fact, In the scholarly literature, it has been

consistently observed that pastors often exhibit greater confidence and are more influenced by health professionals in matters pertaining to healthcare initiatives within their congregations (Privor-Dumm & King, 2020). This phenomenon is notably distinct from the influence exerted by individuals assuming the role of health leaders within the church who lack formal healthcare training. An illuminating example of this dynamic is articulated in a study conducted by Catanzaro et al., 2006, where findings revealed that nurses, as representatives of the healthcare profession, emerged as the most frequently cited source of influence on pastors' decisions to engage with health related initiatives within the church (Catanzaro et al., 2007). Indeed, studies continue to highlight this challenge that faith organisations have (Maxwell et al., 2022; Williams & Cousin, 2021). However, this perspective was not shared among all church leaders, as some felt that the focus must be about balance.

There is a concern however that some pastors do not practice the health message advocated by the church, which undermines its acceptance among church members. Pastors are particularly admonished to regard the necessity and importance of PA in EGW's guidance to the church (White, 1971). PA has a significant impact on the renewal of the body and the enhancement of pastoral labour. Thus, by engaging in regular PA, the body is revitalised and energised, which in turn, promotes general health and well-being, enabling pastors to perform a greater amount of pastoral work (White, 1923). EGW therefore emphasises the need for pastors and leaders to be cognisant of



the need to and the wider impact of engaging in PA, associating such activity with the role of the pastor and or leader.

These findings emphasise the critical role played by pastors in ensuring the effectiveness and long-term viability of such initiatives within religious communities. Therefore, the involvement and support of pastors are widely recognised as crucial factors for the implementation and maintenance of successful health promotion efforts. The recognition of pastors' involvement and support as crucial elements for successful health promotion efforts naturally suggests a recommendation to incorporate them into the conversation early on. This recommendation is particularly pertinent considering the significant influence that pastors have within religious communities (Bopp, 2013; Gross et al., 2018; Su et al., 2021), including the Adventist Church. By engaging pastors from the outset, health promotion initiatives can benefit from their leadership, guidance, and ability to mobilize congregational resources effectively.

In the context of the research design for Study 3, this recommendation was proactively addressed by prioritising the inclusion of pastors in the dialogue surrounding health promotion practices within the Adventist Church. This approach not only aligns with best practices but also ensures a comprehensive understanding of the roles and perspectives of the gatekeepers in shaping and sustaining health promotion efforts within religious settings. By involving pastors early in the conversation, we aim to leverage their insights and leadership to enhance the effectiveness and long-term impact of our health promotion interventions. Additionally, numerous studies,

(Haughton et al., 2020a; Maxwell et al., 2022; Sidibé et al., 2019) consistently indicate that faith-based health promotion initiatives achieve greater success and sustainability when pastors are actively engaged. Additionally, the influence of church leaders, particularly pastors and health leaders, plays a significant role in shaping church members' attitudes toward PA. It was agreed by participants in the initial study that leaders who practice the health message and are physically active can positively impact the engagement of church members in PA.

While health promotion programs addressing nutrition have been well-established within the Adventist denomination, there is a noticeable absence of comparable programs focusing on PA (Schwingel & Gálvez, 2016). Although several PA programs have been developed for specific religious affiliations, age groups, and cultural communities in various demographic regions, the Adventist church has yet to witness the emergence of PA programs explicitly designed for and targeting a particular cultural group or gender among its members (Schwingel & Gálvez, 2016). Notwithstanding, the barriers to regular PA among Adventist in the UK include the COVID-19 pandemic, lack of support from leaders, limited resources, time constraints, and personal factors such as injuries or chronic illnesses.

Being physically active is seen as an integral part of the Adventist identity by many participants, but there are diverse views on the association between Adventism and PA. This highlights the need for a better understanding and interpretation of the Adventist identity and its relation to PA.

Therefore, it is crucial to acknowledge the absence of PA programs or perspectives within the Adventist church, especially in comparison to the well-established nutritional programs. However, the church's commitment to advocating healthy lifestyle habits such as PA is evident in the 28 fundamental beliefs of the Adventist church, particularly fundamental belief #22, which specifically relates to healthy lifestyle habits, as well as the 10 baptismal vows that individuals accept prior to joining the church, where baptismal vow #10 focuses on healthy lifestyle habits (Adventist.org, 2015; McBride et al., 2021b). However, the gap in provision presents an opportunity for future studies to explore the potential benefits and cultural relevance of PA programs tailored specifically for the Adventist church. By addressing this gap, future research can contribute to a more multidimensional understanding of the relationship between religious beliefs, health promotion, and PA within the Adventist church, ultimately informing targeted and effective PA programs for this religious context.

Scholars (Kegler et al., 2012; Opalinski et al., 2020) have observed that considerations related to diet and PA often appear detached from religious frameworks, as evidenced by the persistence of unhealthy meals and sedentary lifestyles prevalent in church-related events for both adults and children. Therefore, a theoretical understanding of why Christians may dissociate specific health behaviours such as PA from their personal religious perspectives could be beneficial in elucidating the diversity in attitudes, motivation, and adoption of such health-related practices (Faries et al., 2023). The concept of "internalisation," which typically involves identifying with,

accepting, or integrating behaviour into one's values, identity, and self-concept, offers valuable insight into this complex interplay (Faries et al., 2020, 2023).

Understanding this disconnect between religious beliefs and health behaviors within the Adventist faith is crucial for developing effective interventions (Anshel, 2010) and programs that bridge this gap. By identifying and addressing the barriers and challenges faced by Adventists in adopting PA habits, health promotion initiatives can be tailored to better align with the values, mission, and theology of the church. Such efforts can ultimately contribute to the harmonization of religious beliefs and health behaviors, fostering a more integrated and holistic approach to wellness within the Adventist church.

In exploring the dynamics of PA promotion within the Adventist Church in the UK, it is evident that a substantial gap exists between the congregation's confidence in the health teachings of the church and their satisfaction with the practical application of PA principles. This discrepancy highlights a prevalent disparity: While Adventists exhibit a robust acceptance and understanding of the health teachings espoused by the church, their confidence in implementing PA-related strategies appears comparatively lower.

Central to this observation is the influential role of the central church leadership of the BUC and higher (the General Conference of the Adventist church which is the global leadership hub of the Adventist church) in shaping the confidence levels of pastors and health leaders in the advocacy and implementation of PA. Notably, studies by Kılınç et al. (2021) and Smith (2021) emphasise the pivotal impact of church leaders'

emphasis on promoting practical PA application (Kılınç et al., 2021; Smith, 2021b).

However, inadequate support and guidance from church leadership can contribute to a tangible gap between health teachings and practical implementation, ultimately decreasing confidence levels among pastors and health leaders.

Furthermore, personal barriers faced by pastors (such as workload and knowledge of PA health promotion strategies) and health leaders (such as organisational support and training) pose significant obstacles in their efforts to promote PA within the Adventist church. These barriers, which include individual beliefs, commitment to PA and deficiencies in knowledge and skills in health promotion, require targeted interventions. Educational initiatives, training programs, and personal development endeavours, as advocated by Tagai et al. (2019), are essential in addressing these challenges and enhancing confidence levels among pastors and health leaders (Tagai et al., 2019).

In addition to personal barriers, organisational factors within the church contribute significantly to the observed disparity. Issues such as resource scarcity, inadequate infrastructure, and the absence of specific guidelines for the promotion of PA inhibit the effective promotion and support of PA initiatives by pastors and health leaders (Kim & Kim, 2020). The lack of a supportive organisational framework restricts efforts to encourage PA adoption among congregants, exacerbating the existing discrepancy.

To effectively bridge this gap and promote a holistic approach to health within

the Adventist Church in the UK, concerted efforts are required. Enhancing leadership support, addressing personal barriers through targeted interventions, and improving organisational structures to align health teachings with practical implementation are essential steps. By acknowledging and addressing these factors, the church can cultivate a culture of PA and overall well-being among its members.

Overall, the study paints a picture of the current state of health promotion within the Adventist church in the UK. It highlights the need for a more balanced approach to health messaging, increased modelling of leadership roles, and improved support systems to foster a culture of PA among church members. The findings of this study also show a notable challenge that exists within the Adventist church in the UK regarding the incorporation of PA, despite the denomination's strong emphasis on health and its commitment to adopting a lifestyle that avoids harm to the body.

## 7.2 Main findings of study 2 [Quantifying the Interplay of Faith and PA]: A Study within the Adventist Community in the UK

The first study examined the state of health promotion within the Adventist church, revealing an overemphasis on certain dietary habits and an inadequate consideration of local needs and constraints. This finding sets the foundation for the subsequent quantitative survey study, which delved deeper into the relationship between religiosity and PA by measuring both variables among church members. While the Adventist church declares its dedication to promoting a healthy lifestyle, this PhD

study reveals a disconnect between these core denominational and doctrinal beliefs and the practical integration of individual health concepts such as PA. Despite the strong emphasis on health within the mission and theology of the church (Banta et al., 2018) participants in the study faced challenges in adopting and maintaining PA behaviors due to a number of factors that are seemingly systemic within the church.

The apparent disconnect between PA and religious beliefs underscores a noteworthy phenomenon within the context of health behaviours among individuals adhering to religious values, particularly within the Christian community. While existing research has established a correlation between religiosity and certain health-related risk behaviours, such as alcohol consumption and smoking, the same cohesive relationship does not extend uniformly to encompass PA (Kim et al., 2017; Kim & Sobal, 2004).

The quantitative study revealed that Adventists who completed the survey prioritise their relationship with God above other aspects of their lives, such as family, health, career, and finance. This highlights the strong religious commitment within the Adventist church which aligns with the previous study findings. Studies have shown that individuals who attend religious services regularly tend to live longer compared to those who do not participate or attend less frequently (Chen et al., 2020a). It is noteworthy that health was not ranked as highly as the spiritual dimension, indicating that Adventists may prioritise their spiritual and relational well-being over their physical well-being. In contrast to other studies (Feiler & Ngo, 2022), Adventists in this study reported moderate to high PA in minutes per session and time per week of PA, however

only 30% met recommended guidelines and the correlation showed a weak negative relationship between religiosity and PA scores. Hence, there was no significant correlation between religiosity and PA ( $p = 0.367$ ). Additionally, the results of this study showed that a notable proportion (55%) of the self-selected Adventist participants reported consistently adhering to a regular PA routine.

Earlier studies have suggested that individuals belonging to religious communities are more likely to engage in regular PA (Anshel & Smith, 2014; Hill et al., 2007). However, one of the main findings of study 2 was that religious people often exhibit insufficient levels of PA. This suggests that there may be a disconnect between the religious beliefs and the adoption of a physically active lifestyle among Adventists in the BUC. The study presents a clear finding: there is no evident link between religiosity and engagement in PA among Adventist individuals. Despite the recognised significance of religious beliefs within the Adventist community, the research demonstrates a lack of correlation between religious priorities and participation in PA. This notable disconnect (mentioned previously) highlights the necessity for in-depth exploration into the factors influencing PA behavior among Adventist individuals. Thus, further investigation is imperative to fully understand the complex interplay between religious adherence and PA engagement within this community.

It is noted however, that the study's findings reveal a variability in the perspectives and behaviors of Adventists in relation to PA. Some individuals may prioritise their religious beliefs independently of engaging in regular PA, while others



may actively integrate their religious values into a physically active lifestyle. These contrasting findings highlight the complexity within the Adventist religion and stresses the need for more integrated research to unravel the underlying factors that contribute to the observed variability.

Subsequently, logistic regression analysis revealed that none of the independent variables examined, (age groups, religiosity score, sex, or level of education), demonstrated statistically significant effects on PA. Although certain variables exhibited associations in terms of their coefficients and odds ratios, these associations did not reach the conventional level of statistical significance ( $p < 0.05$ ). Consequently, within the scope of this analysis, these independent variables do not appear to function as robust predictors of PA, providing valuable insights for further exploration and enquiry in future research endeavours.

The findings also suggest that most Adventists regularly attended religious services. However, while previous research has highlighted an association between service attendance among Adventists and possible health benefits, including increased life expectancy (Maxwell et al., 2022; Wilcox et al., 2022), aligning with broader studies that indicate a positive correlation between religious service attendance and overall well-being (Su et al., 2021), the current study presents a nuanced perspective. However, it is crucial to acknowledge the study's limitations being slightly underpowered as well as the self-selected nature of the sample which is unlikely to be very representative.

Future research with more robust methodologies and a representative sample may provide further insights into these complex associations.

These findings contribute significantly to our understanding of religiosity among Adventists in the study and offer valuable information on the factors that shape their religious beliefs and behaviours relative to PA. The study highlights the importance of the relationship with God and the strength of family bonds within the Adventist church. However, it is crucial to acknowledge the prominent observation that the study did not establish a significant association between religious practises, including regular attendance to religious services, and increased levels of PA. Despite the potential benefits of religious involvement in various aspects of individual well-being, such as mental and emotional health, the study does not provide evidence to indicate a direct causal link between religious practises and increased PA levels.

The frequency of vigorous activities also warrants attention, as nearly one-fifth of the participants engaged in vigorous activities up to three times a week. These activities, which included running, walking, and cycling, demonstrate a proactive approach to maintaining fitness and cardiovascular health among Adventists. The duration of exercise sessions varied, with a notable percentage of participants dedicating between 30 minutes and 60 minutes each session, Although only 30% of the sample were meeting recommended guidelines (Gov.UK, 2020; Public Health England, 2022) . While it is encouraging to observe this commitment to PA , a small proportion of

participants reported no engagement in exercise activities, which highlights the need for tailored interventions to promote PA among this subgroup.

Participants preferred walking, running, and jogging as a regular PA regimen, averaging three miles per session, and covering up to nine miles weekly. This reflects a preference for convenient, integrated physical activities (Ferguson et al., 2022). It is worth noting that a smaller group of participants reported covering distances of four miles with each walk, run or jog indicating a higher level of endurance-based training. These highly active Adventists are committed to their health but given the findings from the previous study, interpreting the connection that their religious beliefs play in engaging in PA remains unclear.

Participants disclosed their engagement in leisure activities such as fast walking, casual cycling, and leisure swimming. Notably, a significant proportion of participants did not engage in PA on a typical Saturday, which is unsurprising because of the requirements in observing the sabbath, aligning with one the fundamental identities and practices of the Adventist church (Seventh day Adventist Church, 2023). (Seventh day Adventist Church, 2023). However, higher levels of moderate PA were reported for typical weekdays, suggesting that participants actively prioritise physical health during non-religious periods of the week. Additionally, a smaller number of Adventists reported engaging in moderate PA on Sundays, reflecting individual variations in religious practices and preferences.

Regarding vigorous PA, a minority of participants engaged predominantly on Sundays, with an average session duration of 20 minutes. However, the majority did not participate in vigorous PA on a typical Saturday, primarily due to religious commitments and practices. The government guideline however recommends that at least 75 minutes per week should be set aside for vigorous PA (Public Health England, 2020) (Gov.UK, 2020). However, a small number of participants reported engaging in extremely vigorous PA, such as heavy weightlifting or running a marathon on weekdays.

Overall, these findings provide a nuanced understanding of the complex relationship between religiosity and PA engagement among Adventists. The results connect with other findings that suggest more than half of Adventists engages in some form of PA (Majda et al., 2021). Further research is needed to explore the underlying factors that drive or hinder PA engagement among Adventists and to develop targeted interventions that promote PA within religious communities.

Therefore, the need for further exploration is the prelude to the third study which was a series of focus group sessions with the pastors and health leaders of the church. these two very important roles are responsible for the operationalising and health respectively of the church.

Recognising the role of the health leaders and health ministries within the church and capitalising on both the pastors' and health leaders' influence can contribute to an inclusive and church-centred approach to PA, health promotion and disease prevention (Conley et al., 2023; Haughton et al., 2020a; Majee et al., 2022; Odukoya et

al., 2023). It is important therefore to understand that most Adventists' congregations within the study reported to have a health department that is assigned a health leader. Health ministries within faith communities have emerged as a promising yet underutilised resource for improving community health (Williams et al., 2020). These health ministries, embedded within the Adventist's religious context, possess unique strengths such as established social networks, trust, and community outreach, which can be harnessed to promote PA, mental, and social well-being. By leveraging their existing infrastructure, health ministries have the potential to disseminate health information, facilitate access to healthcare resources, and create supportive environments for behavior change (Williams et al., 2020).

Hence, having a series of focus group sessions with pastors and health leaders to uncover the disparity between deeply held beliefs and PA will help to better understand the potential challenges that exist and the possible collaboration between the two roles to address the seeming disconnect, apparent within the findings of study 1.

### 7.3 Main findings of study 3: Gaining Deeper Insights into Adventist Beliefs and PA

#### Health Promotion Practices Through Engaging Focus Group Discussions

Findings from the focus group study with pastors and health leaders suggests that the existence of stigma within the church about body image may contribute to the reduced confidence levels of both pastors and health leaders. This stigma can restrict empowerment, affect the views of individuals about their bodies (Burgin, 2022), and PA

messaging plus limiting the ability to effectively promote and advocate for healthy lifestyle habits, such as PA. Consequently, this lack of empowerment can impact the confidence of these leaders in delivering health promotion messages and initiatives within the Adventist church (Baruth et al., 2015; Bopp et al., 2013; Webb et al., 2013).

These findings points out the importance of addressing the underlying issues that hinder the confidence and effectiveness of health promotion efforts within the Adventist church. One of those areas arising from this study and others (Wells et al., 2022b) is regarding training for both pastors and health leaders, teaching them the fundamental principles of health promotion, equipping pastors and health leaders with the necessary skills and knowledge to effectively promote healthy lifestyle habits, including PA.

The General Conference of the Adventist church explained that Adventists believe that preserving health is as important as preserving one's character, highlighting the vital role of promoting an in-depth understanding of basic health principles within Adventist religion and theology (General Conference of Seventh-day Adventist World Church, 2023b). This emphasis on the connection between PA and religiosity shows the importance of health education and awareness as integral components of the Adventist beliefs, inspiring people to prioritise their well-being alongside their spiritual development. Therefore, much more efforts can and should be made to address the existing stigma related to body image, empowering pastors, and health leaders to confidently promote holistic well-being within the church community. Addressing the

stigma related to body image within the Adventist church could involve implementing programs that integrate PA with Christian religious principles. Research by Elizabeth J. Krumrei-Mancuso (2016) suggests that such initiatives could lead to reduced body shape preoccupation or stigma and improved mental and emotional health among members of religious organisations (Krumrei-Mancuso, 2016). These programs could include PA classes or activities that incorporate spiritual elements, such as prayer, meditation, or reflection, to promote a holistic approach to well-being. Additionally, providing education and resources on body positivity and acceptance within the context of religious teachings could further support efforts to combat stigma related to body image.

The imperative to address and mitigate the existing stigma related to body image within the church community is further amplified by its profound implications for the holistic well-being of individuals. Body image concerns have been extensively linked to various physical and mental health challenges (Mahindru et al., 2023; Silvers & Erlich, 2023), making their resolution crucial for promoting overall health. By empowering pastors and health leaders to confront and dispel this stigma, a conducive environment is cultivated to foster open discussions about body image, mental health, and well-being (Tiggemann & Hage, 2019). This proactive approach aligns with the broader goal of promoting holistic health within religious communities, highlighting the interconnectedness of the physical, mental, and religious aspects of individuals (Page et al., 2020). Consequently, efforts aimed at dismantling stigma and empowering

leadership to champion holistic well-being contribute significantly to fostering a healthier and more supportive church environment.

By addressing these challenges, the Adventist church can foster an environment that encourages and supports the promotion of healthy lifestyle habits, aligning with the holistic health message it espouses. This, in turn, can lead to greater confidence, effectiveness and integration of health promotion methods within the church, ultimately benefiting the overall well-being of its members.

The findings of Study 3, which involved focus groups with pastors and health leaders within the Adventist church, revealed important information on the promotion of PA in the religious context. The focus groups highlighted a significant gap in communication and collaboration between pastors, health leaders, and general members of the church on health promotion efforts, particularly related to PA.

The discussions highlight the independent roles and limited interaction between pastors and health leaders when it comes to promoting PA and general health promotion efforts. This lack of collaboration may hinder the effectiveness of health promotion initiatives within the Adventist church and other religious organisations (Bernhart et al., 2019; Sharpe et al., 2020). The study also uncovered potential barriers that hinder the integration of PA into the religious fabric, limiting the impact of health promotion on lifestyle habits. These barriers are related to cultural and traditional practices within the church, which may pose challenges, as adherence to established norms might conflict with modern notions of PA (Branson & Martinez, 2023).



Furthermore, perceptions of a potential conflict between physical well-being and religious practices could also impede the seamless incorporation of PA (Koburtay et al., 2023). Notably, limited knowledge or awareness about the compatibility of PA with religious values may contribute to resistance among church members, therefore, emphasising the need for educational initiatives (Sidibé et al., 2019).

Other potential barriers to the successful integration of PA into the religious fabric were institutional policies, or the lack thereof, which may impact the ability to create an environment supportive of PA within religious settings (Hermstad et al., 2018; Saunders et al., 2022). Time constraint was also a factor, due to busy religious schedules, coupled with the absence of suitable infrastructure and facilities, which pose practical challenges towards fostering an environment that suitably facilitates PA engagement among members (Bantham et al., 2021). Nevertheless, the influence of leadership, the physical environment of religious spaces, and the prevailing social norms can collectively shape attitudes toward PA within religious communities (Koehrsen & Huber, 2021). Overcoming these barriers necessitates a holistic approach that involves educational campaigns, community engagement, and leadership endorsement, promoting the understanding that PA aligns with religious values and contributes to holistic well-being (Haughton et al., 2020a).

These findings are consistent with the literature, which emphasises the need for a more extensive approach to health promotion (McKenzie et al., 2022) within the Adventist church. The findings of this study emphasise the importance of improved

communication and collaboration between pastors and health leaders to improve the integration of PA promotion within the religious context (Anshel & Smith, 2014; Wells et al., 2022a; Wilcox et al., 2021). In discussing the barriers to promote PA within religious contexts, the discussion so far highlights the influence of factors such as individual attitudes, interpersonal relationships between pastors and health leaders, organisational policies, community norms, and societal perceptions.

The discussion of the Bronfenbrenner social ecological model (SEM) (1979) will illuminate the holistic understanding of PA within the context of the church, particularly given the barriers identified in the study. By examining the microsystems, the mesosystems, the exosystems, and the macrosystems, the model will elucidate how these barriers interact and influence PA behaviours among church members. This approach recognises the complexity of promoting PA in religious settings, considering factors such as cultural norms, perceptions of conflict between physical well-being and religious practices, limited knowledge of the compatibility of PA with religious values, institutional policies, time constraints, and inadequate infrastructure. By thoroughly exploring these factors through the lens of the SEM, a deeper understanding of the challenges and opportunities to promote PA within the church community can be achieved.

Therefore, based on the insights from Study 3, it is evident that fostering better communication channels and facilitating collaboration between pastors and health leaders are critical steps toward developing more effective health promotion strategies

within the Adventist church. By addressing the communication gap, providing support and resources, and fostering a shared vision, the leaders of the Adventist church can better promote and integrate PA into the religious fabric of the church thus promoting a healthier and more active Adventist community. The responsibility of addressing the communication gap and fostering the integration of PA into the religious fabric of the Adventist church lies with its leaders, comprising pastors, health leaders, and other influential figures within the church, such as those who make decisions at the church's UK head office (the British Union Conference). Effective strategies must be employed to facilitate this process, drawing on existing research and recommendations.

Firstly, improving communication channels is essential. Regular meetings or forums should be established where pastors, health leaders, and church members can openly discuss health promotion efforts, including PA initiatives. Establishing dedicated committees or task forces focused on health and wellness within the church could facilitate ongoing dialogue and collaboration (Breland-Noble et al., 2020).

Second, educational programmes can be implemented to raise awareness among church members about the importance of PA and its alignment with religious values. These initiatives could take the form of workshops, seminars, or educational materials (Kranich, 2021), distributed through various channels such as sermons, newsletters, or social media platforms. By providing information and resources, leaders can empower the church to make informed decisions about their health and well-being (Lansing et al., 2023).

Additionally, fostering collaborative planning processes is crucial. Pastors, health leaders, and church members should be encouraged to work together to co-design and implement PA promotion initiatives that resonate with the church's values, cultural sensitivities, and beliefs. Joint planning sessions could facilitate the sharing of ideas and expertise, ensuring that initiatives are tailored to the specific needs and preferences of the church (Stowell et al., 2020).

Lastly, resource allocation plays a vital role in supporting PA-related activities. church leaders can consider allocating funding and space within church facilities to facilitate the implementation of PA initiatives. This could include organising PA classes, sports events that promote church involvement and well-being (Derose et al., 2022; Haughton et al., 2020a) .

Within the Adventist church health promotion is often conducted by the health leader, and studies have shown that health leaders are generally active in health promotion interventions (K. H. C. Kim et al., 2008; Wilcox et al., 2007). However, findings from an international study observed that the health promotion and health message that is delivered in the Adventist church, has significantly been reduced to one lifestyle habit or at best, a few dietary habits, such abstaining from flesh foods (Schwingel & Gálvez, 2016). As a result, there appears to be an overemphasis on vegetarianism, veganism, or a plant-based dietary habit.

All participants in the focus group study recognised and accepted the value of PA; however, most pastors said they lacked confidence and openly questioned their

credibility in promoting PA. This is not dissimilar to findings showing that a lack of self-efficacy is a significant barrier to PA promotion within churches (Haughton et al., 2020a). However, this study found that social support, including structural, evaluative, and emotional support, was much desired to mitigate the barriers faced by members of churches not just in England and Wales, but the wider UK.

Focus group participants acknowledged the impact of contextual factors and the interpretation and relevance of what was written both in biblical times and more recently in the nineteenth century regarding PA. They emphasised the need for a scholarly and scientific approach that considers the diverse cultural backgrounds, historical contexts, and contemporary challenges faced by Adventists in the UK currently. Therefore, by engaging in rigorous theological analysis, historical understanding, and critical examination of relevant sources, a clearer and more in-depth understanding can be fostered.

To bridge the gap between different perspectives and enhance collective understanding, participants highlighted the importance of continued respectful dialogue, open discussions, and collaborative research. These measures were proposed to promote an environment in which the biblical teachings and the guidance of EGW can be examined and synthesised in a way that aligns with contemporary knowledge and the evolving needs of the church (Dailey, 2023). Therefore, by addressing the complexities of interpretation and context, the Adventist church can strive towards a more unified and informed approach to the health message. This entails recognising the

dynamic nature of knowledge and understanding and actively integrating new insights while maintaining a firm foundation in biblical principles and EGW's guidance.

The study highlights a significant gap in the collective understanding within the Adventist church in England and Wales regarding the association between the church's identity and engagement in PA. The finding of a significant gap in the collective understanding within the Adventist Church in the UK regarding the association between the church's identity and engagement in PA enriches the understanding of the disconnect between religion and PA identified in Study 1. This shows the complexity of bridging the gap between religious beliefs and health behaviors within religious communities, particularly within the Adventist context. Despite the evident emphasis on health within the Adventist Church's mission and theology, the lack of clarity or awareness among members regarding the role of their religious identity in promoting PA indicates a deeper disconnect. This suggests that while religious institutions may endorse health-related values, translating these values into tangible behaviors such as PA engagement requires further exploration and perhaps targeted interventions to address underlying perceptions and understandings among church members. Despite a general acceptance that PA is a crucial component of the church's health message, the study suggests a disconnect between explicit acknowledgment and implicit understanding within the Adventist church. The guidance of EGW, which emphasises the intrinsic link between physical well-being and religious status, underlines the reciprocal impact of health behaviours on religious aspects. Like others, EGW specifically identified

physical inactivity as a harmful habit that significantly impairs mental development (Bu et al., 2021; Douglass, 2000; Faries et al., 2020; Ju et al., 2023; Mahindru et al., 2023; Sallis et al., 2021; White, 1897a, 2016c, 2016a, 2016b). The study also emphasises the need for concerted efforts to bridge the gap between explicit recognition of PA in the health message and its implicit integration within the fabric of the Adventist church in England and Wales.

The importance therefore of understanding the link between the philosophy and ideology of the Adventist religion with respect to PA is also imperative to the Adventist identity and awareness of the pillars on which the Adventist message of health is based (White, 1938). EGW outlined three principles that demonstrate the link between the gospel the church preaches and the health message. Firstly, the Humanitarian Principle, wherein the pursuit of health reform is elucidated as a divine instrument to alleviate human suffering globally; secondly, the Evangelical Principle, positing health reform as a pivotal conduit for the dissemination of the Gospel, functioning as a transformative bridge intersecting with individuals in their diverse contexts; and thirdly, the Soteriological Principle, uniquely characterising the Adventist commitment to health reform as an instrumental preparation for the imminent advent of the Jesus, thereby imparting a distinctive eschatological dimension to nineteenth-century health reform within the Adventist framework (Douglass, 2000; Shipton, 2017, 2019).

Exploring the correlation between the Adventist's identity and a specific health habit, such as PA, is an interesting endeavour. Not least because, such an investigation

holds the potential to shed light on the factors or motivations that may underlie how Adventist beliefs and values impact lifestyle choices, providing valuable insights into the nexus between religious identity and health behaviors and offering a nuanced understanding of the potential reasons driving these connections. It is therefore essential to understand and articulate how these health habits are part of a broader religious dimension. While some may find this connection improbable, others justify it by emphasising the holistic nature of the Adventist health message. Ultimately, the Adventist health message was intentionally designed to impact the overall lifespan and is not limited to a single habit, recognising the interconnectedness of various health practices. (Galvez, 2017).

As such, pastors and health leaders may need to better understand how aspects of the health message such as PA connect with the Adventist church's ideology and the crucial role, they played in shaping the understanding of the church, both in theory and practice. However, there appears to be a disconnect between pastors and health leaders communicatively, which both the initial interview study and the focus group study highlighted. Hence, it was suggested by one member in the focus group that training is not limited to health promotion concepts, but a synergistic relationship between the health leader and the pastor would greatly impact the church.

Consequently, the absence of positive reflection and leadership modelling within the Adventist church and its health practice related to PA can initiate a negative or no perception of religious identity and PA, as was noted in the study. Furthermore, studies



have shown that the health behaviour of pastors and health leaders significantly affects the amount of health and wellness activities offered at their church (Bopp & Fallon, 2011). Therefore, given that the prevalence and contextualisation of health promotion initiatives are contingent on the leadership's actions, it may therefore be appropriate that both pastors and health leaders undergo training in health promotion and acquire a systematic framework for fostering collaborative ministry within the church. This necessity arises from the recurring theme of my thesis, underscoring the pivotal role of informed and prepared leadership in steering effective health promotion efforts within the religious community.

#### 7.4 Synthesis of Findings and Implications for Social Ecological Model (SEM) Analysis

The synthesis of the findings from the three studies conducted on the Adventist church in the UK provides a multifaceted understanding of how religious structures, beliefs, and practices influence PA. This synthesis paves the way for the subsequent SEM discussion, as established and outlined by Bronfenbrenner (Bronfenbrenner, 1975) by integrating qualitative and quantitative insights into a coherent narrative.

##### Study 1: Semi-Structured Interviews

The qualitative phase reveals a deep-rooted belief among Adventists that health promotion is intrinsic to their religious ethos, with an emphasis on sharing this belief with the broader community. However, a significant skew towards nutritional health was identified as an overt feature within the Adventist church community. This imbalance

limits the holistic understanding and application of the church's health message, impeding the broader acceptance of PA. Furthermore, the credibility of health promotion is further compromised by the failure of some pastors to practice what they preach regarding PA, which diminishes the trust and confidence of church members in adopting these health practices.

#### Study 2: Quantitative Survey

The quantitative findings highlight that Adventists prioritise their spiritual relationship with God above other aspects of life, including health, family, career, and finances. This strong spiritual focus aligns with the qualitative insights but also reveals a potential oversight of physical well-being. Although moderate to high levels of PA are reported, only a small percentage of participants (30%) met recommended PA guidelines. The weak negative correlation between religiosity and PA suggests that higher religious commitment does not necessarily lead to increased PA, and in some cases might even detract from it. Despite this, most of the participants participate in walking, running, and jogging, indicating awareness of the benefits of PA but not necessarily integration into their spiritual practice.

#### Study 3: Focus Groups with Pastors and Health Leaders

The focus groups uncover several barriers to effective PA promotion within the Adventist church. The stigma surrounding body image affects both the confidence of health leaders and pastors, limiting their effectiveness in promoting PA. Additionally, the gap in communication and collaboration between pastors, health leaders, and church

members hinders cohesive health promotion efforts. Cultural and traditional practices present additional challenges, as they sometimes conflict with the contemporary recommendations of the PA. Institutional policies or lack thereof, along with time constraints and inadequate infrastructure, pose practical barriers to fostering a supportive environment for PA. Despite recognising the value of PA, pastors' lack of confidence in promoting it suggests a need for targeted training to enhance their advocacy skills.

#### Integrated insights for SEM model discussion

The findings from the three studies converge on several pillars that will inform the SEM model discussion:

**Perception and practice of health promotion:** There is a notable disparity between the ideals of the Adventist church for health promotion and their practical application, particularly in relation to PA. While nutrition is emphasised, PA remains underrepresented, highlighting the need for a more balanced health promotion approach.

**Religiosity and PA Engagement:** The absence of a significant correlation between religiosity and PA signifies the complexity of integrating spiritual and physical health. This finding suggests that religious commitment alone is insufficient to drive PA engagement and that other factors, such as cultural practices and institutional support, play crucial roles.

Barriers to Effective PA Promotion: Stigma, cultural traditions, insufficient institutional policies and logistical challenges such as time constraints and lack of facilities are major barriers. These issues need to be addressed to create an environment conducive to PA within the church.

Leadership and Advocacy: The pivotal role of church leadership in health promotion is evident, yet their lack of confidence and the existing communication gaps significantly impede PA advocacy. Effective training programmes for pastors and health leaders are essential to equip them with the skills and knowledge necessary to promote PA confidently.

These integrated insights highlight the multifaceted nature of health promotion within the Adventist church, emphasising the need for a comprehensive, culturally sensitive, and collaborative approach. The subsequent SEM model discussion will delve deeper into these relationships, providing a structured framework to understand the interplay between religiosity, cultural practices, institutional support, and PA engagement. This approach will facilitate the development of targeted programmes, interventions and policies aimed at integrating PA into the religious and cultural fabric of the Adventist community, ultimately promoting a healthier, more active lifestyle among its members.

## 7.5 Continued Exploration and In-Depth Analysis and Discussion

The following discussion provides an in-depth exploration of the SEM as a framework for understanding the impact of the Adventist church structures, beliefs, and practices on PA engagement. This analysis delves into the various environmental systems proposed by Bronfenbrenner (1975) and their relevance within the context of religious communities such as the Adventist Church.

The SEM, as articulated by Bronfenbrenner (1975), offers a thorough framework for understanding human behaviour within various environmental contexts (Bronfenbrenner, 1979, 2010, 1975). It posits that individuals are influenced by multiple interconnected systems, from the immediate microsystem of family and peers to the mesosystem, the exosystem, and the broader macrosystem of cultural values and societal norms (Bronfenbrenner, 1975, 1977, 1994; Mcleroy et al., 1988). This model provides a lens through which researchers can explore the complex interplay between individual behavior and environmental factors. When applied to the study of religious institutions (like the Adventist church), the ecological model becomes particularly relevant (Serra et al., 2023).

Within the microsystem, otherwise known as the “Individual level” (Sidibé et al., 2019; Wells et al., 2022a) of the Adventist church, individual behaviors are influenced by factors such as family dynamics, peer interactions, and direct involvement in church activities. For instance, familial support for PA and adherence to health-related practices encouraged by the church can significantly impact an individual's willingness to engage

in PA (Felten-Barentsz et al., 2021; Rhodes et al., 2020). Peer networks within the church community may also play a role in shaping attitudes toward health and wellness, with social norms and expectations influencing behaviour among members (Bronfenbrenner, 1979).

Moving beyond the microsystem, the mesosystem encompasses the interactions between different microsystems, highlighting the interconnectedness of various spheres of influence (Bronfenbrenner, 1977, 1994; Onwuegbuzie et al., 2013). In the context of the Adventist church, this may involve the integration of health-promoting practices into religious rituals and traditions. For example, Sabbath observance can include activities such as nature walks or group PA sessions, fostering a culture of PA within the church community. Additionally, collaborations between the church and external organisations, such as health ministries or community centres, can further support the engagement of PA among members (Hopoi & Nosa, 2020).

The exosystem extends the analysis to external environments that indirectly influence individual behaviour, such as religious institutions and community organisations. In other words, this is an extension of the mesosystem, which incorporates the formal and informal social structures within an organisation without the direct involvement of an individual (Bronfenbrenner, 1977). Therefore, within the Adventist church, the exosystem can encompass the influence of church leadership and organisational policies on health promotion initiatives. For example, the implementation of health-focused programmes or the provision of resources for PA within church

facilities can create supportive environments that facilitate participation among members (Johnson-Lawrence et al., 2019; Kwon et al., 2017).

At the macrosystem level, broader cultural and societal factors come into play, shaping the values, beliefs, and norms that inform individual behavior (Bronfenbrenner, 1979, 1977; Ewald et al., 2023). For Adventists, religious teachings on health and wellness, including the principles of temperance, exercise, and nutrition, play a central role in the influence of lifestyle choices. Moreover, societal attitudes towards PA and lifestyle behaviours may intersect with religious beliefs, reinforcing or challenging existing norms within the Adventist community.

By examining these multiple layers of influence through the lens of the SEM, researchers can develop a nuanced understanding of the environmental factors that shape behavior within religious communities such as the Adventist church. Studies such as those exploring facilitators of participation in religiously affiliated PA programs (Conley et al., 2023; Derose et al., 2022; Odukoya et al., 2023; Randall et al., 2023b; Young-Eun et al., 2022) provide valuable insights into how the SEM can inform our understanding of behavior within these contexts. Furthermore, research on SEM of health promotion emphasises the importance of considering broader cultural and societal influences on health behaviours (Hawkins et al., 2021; Maindal et al., 2021), which is especially pertinent in the context of religious communities such as the Adventist church (Galvez et al., 2021).

Socio-cultural determinants presented specific challenges in influencing behavioural change towards PA, and both health leaders and pastors felt inadequately equipped to address these challenges in a positive and creative manner. Consequently, understanding specific theories such as the SEM, which underpins behaviour change, may be beneficial for leaders to begin to understand the model of approach that would achieve the desired outcome. This perspective emphasises the need for strategic and tailored frameworks that consider the complex interrelationships among these factors to effectively address and mitigate health challenges (Tutu et al., 2023).

The following discussion utilise the SEM to discuss the study findings and factors relating to PA promotion within the Adventist church.

#### The Microsystems: church leaders and members

The challenges faced by health leaders, as identified in the study, can be exacerbated by the voluntary nature of their role rather than being formally employed. Within the church setting, volunteering serves as a means through which the community engagement and nurturing efforts of its members are extended (Hughes, 2019). Furthermore, there are factors such as the educational background and experiential knowledge that may need to be considered when appointing a health leader who is responsible for the overall health of the church. Research suggests that individuals' perspectives on PA within religious communities are significantly influenced by their



immediate social circles and personal encounters (Catanzaro et al., 2007; Sharpe et al., 2020; Williams & Cousin, 2021).

Within the Adventist church microsystem, family dynamics, interactions with peers, and active participation in church activities have considerable influence on attitudes toward PA. For example, familial encouragement for PA and adherence to health-related practices advocated by the church can profoundly impact one's inclination to engage in PA. Similarly, social norms and expectations within peer networks within the church community can shape individuals' attitudes toward health and wellness, thereby affecting their behaviors.

Furthermore, personal experiences within the immediate church environment, such as involvement in health-oriented programs or exposure to health promotion initiatives, contribute significantly to the formation of attitudes toward PA (Bernhart et al., 2019). These interpersonal dynamics within the microsystem interact with individuals' personal beliefs and motivations, ultimately moulding their attitudes and behaviours concerning PA within the religious setting.

Within the microsystem of a religious organisation including the Adventist Church, individual interpretations of theology and health teachings significantly shape attitudes toward PA (Aljayyousi et al., 2019). The variation of views regarding PA and its connection with EGW writings and biblical text, therefore, stems from varying theological perspectives, with individuals interpreting complex biblical passages

differently within their immediate interpersonal networks and personal experiences. EGW's guidance, a central component of Adventist theology, further influences individual attitudes toward PA within the microsystem. The interpretation and application of EGW's writings on health, including the endorsement of PA (White, 1894b, 1897a, 1967), contribute to diverse opinions on the specifics of PA and its significance within the Adventist framework.

EGW's recommendations regarding PA, including its mandate as a life-sustaining imperative for the sick, echoed the implicit importance of PA within the microsystem of the Adventist church (White, 1964, 1971, 2004). The evolving scientific support for EGW's health teachings in recent times adds complexity to attitudes and behaviours toward PA within the microsystem (Moon & Standish, 2015; White, 1932). As individuals within the microsystem interpret and apply theological teachings in their daily lives, their attitudes and behaviours toward PA may vary based on their understanding of these health principles. This interaction between immediate interpersonal networks, personal experiences, and interpretations of theological teachings highlights the complexity of attitudes and behaviours toward PA within the Adventist church microsystem. Indeed, the historical and cultural context in which the biblical texts were written, as well as the period in which EGW lived, further generated differing views among the participants in this study. These varying perspectives are rooted in the distinct historical and cultural contexts surrounding the relevant writings.

Pastors have a significant responsibility to support the activities of health leaders within their congregations (Ayton et al., 2016; Hatzikiriakidis et al., 2023; Morales-alemán et al., 2018). This support requires a thorough understanding and familiarity with the specific responsibilities assigned to health leaders. The challenge with the Adventist church, however, is that the church conducts, to a great degree, most of its workshops and other training that are not health promotion related, in-house. This factor poses an additional potential obstacle to collaborative and evidence-based initiatives, particularly those focused on health promotion and PA. This internal approach limits exposure to diverse perspectives and innovative strategies from external networks, hindering the adoption of effective practices (Hatzikiriakidis et al., 2023). Additionally, it may restrict access to specialised expertise and resources outside the church community, impeding program development and implementation. Relying on internal resources may also perpetuate existing biases, hindering the adoption of new ideas supported by research (Hopoi & Nosa, 2020). Therefore, the insular nature of conducting activities within the church poses obstacles to fostering collaborative partnerships and using evidence-based practices to promote health and PA.

Individual health is intricately shaped by various contextual influences such as family, work, community, and the broader political environment and therefore requires an effective validated or evidence-based approach. However, addressing the fear of resistance that pastors and health leaders have is paramount if leaders want to impact the church through health promotion. In fact, pastors and health leaders can contribute

to promoting PA and influencing beliefs, attitudes, and behaviour change at various levels by participating in activities such as providing health education on PA, delivering sermons that discourage physical inactivity, and supporting strategies aimed at promoting PA (Majee et al., 2022).

There appears to be a strong association with the historical affiliation with the Adventist religion and being a baptised member. However, there are members who had no historical affiliation to include pastors. This is significant, not least because of possible trends that may inform the status, or positions held in the church by members. In other words, it was not simply a matter of affiliation (religious history), but degrees of religious commitment, attendance at religious service, religious growth, religious practice, and other dimensions of religiosity that may be involved (Koenig et al., 2012). One must also consider the level of exposure to the style, emphasis, and context of health promotion that health leaders have experienced within the church. Additionally, those who are born into the Adventist tradition may have a better grasp of its PA message.

Although the study participants perceived their beliefs about health (including PA) and religious beliefs to be inseparably linked, the integration of their religious beliefs and PA was vague and uncertain. In fact, as the quantitative analysis showed, there are some highly religious Adventists, as there are some highly physically active ones; however, the correlation is rather weak to negative. This suggests that there are extrinsic factors that may be involved in the motivation of Adventists to engage in PA. The concept of extrinsic motivation refers to participation in an activity with the primary

intention of achieving a distinct outcome or reward. On the contrary, intrinsic motivation involves participating in an activity for the inherent satisfaction and enjoyment derived from the activity itself, rather than for any external incentives or goals (Deci et al., 2017).

This dichotomy is also evident among church congregations, where certain members with conservative theological perspectives may prominently include meat in their diets without perceiving a contradiction with the health message (Gerber et al., 2021). In contrast, liberal Adventists tend to be more health conscious in a principled manner, thereby looking to the reward of better health while showing less interest in the apocalyptic claims of Adventism (Knight, 2000). Conservative Adventists, on the other hand, may often exhibit heightened preoccupation with apocalyptic beliefs, reducing the health message to a mere checklist for "preparation for the final crisis."

Furthermore, an examination of Adventist religiosity reveals a predominantly private, inward, and cerebral orientation (Knight, 2010), which may not be directly perceived as interconnected with PA. Consequently, if there exists a contemporary emphasis on health among Adventists, it tends to revolve around diet (Banta et al., 2018; Sábaté et al., 2016). The promotion of PA aligns with the current attitudes and priorities related to health within the Adventist church.

The promotion of PA aligns with the current attitudes and priorities related to health within the Adventist church. It is therefore interesting that PA is part of the health principles as outlined in the above-mentioned package of lifestyle habits that the church

advocates; however, there are notable barriers and disconnect with the very principles that are said to be among the pillars of health across all levels of representation in the church.

The ongoing discourse surrounding some of writings by EGW has engendered a level of misunderstanding, leading to a prevalent sense of caution among Adventists regarding competitive sporting endeavours. This caution can be attributed to EGW's documented perspectives on PA, encompassing both their presence within educational settings and their occurrence outside of them. In her health reform article spanning the years 1866 to 1887, EGW expressed disapproval toward competitive sports, which she referred to as "The Physical Culture." These sentiments have had a notable influence on shaping the Adventist attitudes and tendencies, particularly concerning team-based competitions involving physical contact (White, 1894b).

EGW also drew associations in her writings between competitive sports and the games of ancient Rome, characterising them as part of a culture that fosters brutality (White, 1894a). The reception of her views on this matter has undoubtedly been mixed, given the well-documented and widely recognised benefits that sporting activities offer in terms of mental, physical, spiritual, and emotional well-being (White, 1894a).

Consequently, Adventists can find themselves grappling with the tension between recognising the importance of disciplined PA and discerning its relationship to religious disciplines. Although the importance of participating in structured physical activities is recognised within the Adventist church, the precise connection between these activities

and religious practices may not be explicitly defined or fully understood. As a result, there appears to be a degree of ambiguity and varying interpretations regarding the integration of the discipline of PA within the religious framework of Adventism.

Additionally, an aspect that appeared not to be addressed within the church is the issue of body image. One study showed that adult women in particular commonly report experiencing significant levels of body dissatisfaction; however, they are frequently disregarded or excluded from body image promotion programs (Blomquist et al., 2021). The challenges lie in finding suitable venues for effectively addressing body image concerns among particularly among adult women. Interestingly, religious institutions, particularly churches, serve as regular meeting places that can potentially provide opportunities for intervention and support in this domain through the medium of PA. Notably, most of the participants in this study were adult women who expressed challenges but also self-reported high levels of PA in the survey.

In this study, pastors and health leaders have expressed their concerns about the widespread prevalence of obesity within the church community, acknowledging it as a global epidemic. This shows a strong potential also for targeted and structured PA intervention and improvement given the link between low levels of PA and obesity or other noncommunicable diseases.

Considering the church's emphasis on followership of Jesus Christ as a way of life, it is noteworthy that Jesus himself maintained a physically active lifestyle. Historical

accounts depict Jesus frequently walking wherever he went, relying on his own two legs for transportation (Sweet, 1996). This indicates that Jesus recognised the importance and purpose of exercise. Interestingly, the survey conducted in this study revealed that walking was the most popular form of exercise among Adventists in the UK. However, it remains unclear whether this preference for walking directly reflects the lifestyle habits of Adventist worshippers who strive to follow Jesus Christ.

To incorporate PA within a religious context, one potential approach is the practice of "prayer walking." This involves engaging in active conversations with God, alone or with others, while walking. Remarkably, there are instances in the Bible where Jesus demonstrated this habit, praying while walking with friends ( Matt. 14:19; 15:36; 26:26-27), disciples (Luke 11:1), or even alone (Mark 1:35; Luke 5:16). Some accounts even mention Jesus engaging in prayer walks throughout the night (Luke 6:12), before making important decisions or during significant events (Luke 3:21; 9:18, 28-29; Mark 14:35). Therefore, by presenting the scientific evidence linking physical inactivity to obesity and related health risks, along with historical references to Jesus' active lifestyle and prayer walk, it becomes apparent that encouraging PA within the church community can align with the teachings and principles of following Jesus Christ.

Therefore, within the Adventist church microsystem, individual interpretations of theology and health teachings significantly shape attitudes toward PA behaviours. The variation in views regarding PA and its connection with EGW writings and biblical text stems from varying theological perspectives, influenced by personal encounters and



social circles. Personal experiences within the immediate church environment, such as involvement in health-oriented programs or exposure to health promotion initiatives, contribute significantly to the formation of attitudes toward PA (Allicock et al., 2013; Bantham et al., 2021; Odukoya et al., 2023).

In addition, this study showed that there is no significant relationship between religiosity levels and PA levels among participants. Despite the integration of health principles within religious teachings, majority of participants did not meet recommended guidelines for PA, highlighting potential areas for intervention and improvement. This suggests that although religious beliefs can influence attitudes toward PA, additional factors within the microsystem, such as social norms and personal experiences, play a crucial role in determining actual PA behaviours.

#### The Mesosystems: interactions between pastors, health leaders and members

The training of both pastors and health leaders to be better equipped and empowered to lead and promote PA is considered paramount within the Adventist Church in the UK, fostering a religious culture that promotes positive awareness towards PA among members (Arredondo et al., 2022; Johnston et al., 2022; Perez et al., 2022). The aftermath of the 1844 disappointment led to intense study and reflection by Adventist pioneers like EGW and James White. This period of theological introspection resulted in the emergence of distinctive Adventist beliefs, including health principles. These fundamental doctrines have significantly influenced the health message within

the Adventist faith community, shaping the way it is understood, conveyed, received, and valued (L. M. Kent et al., 2016).

At the interpersonal level, there are other researchers who agrees with EGW's guidance to ministers, emphasising the need for periods of rest and daily PA (Chimoga, 2019; White, 1894a, 1892). The responsibility of pastors, health leaders, and the wider church community to attend to their health is considered a "sacred duty," highlighting the interpersonal influence of religious leaders on the well-being of the community (White, 1892). The ministers' role as disseminators of truth and their impact on congregants' perceptions link interpersonal relationships with health promotion (Chimoga, 2019; White, 1994).

Furthermore, this level is highlighted through the emphasis of the Adventist Church on the message of health within its theological framework. Historical factors, such as the dependence on the Levitical dietary system and the tendency to reduce the health message to a single habit, contribute to interpersonal dynamics within the church community. This reflects the shared values and beliefs within the Adventist community (Douglass, 2000; McBride et al., 2021a; Seventh day Adventist church, 2023).

The interactions within the Adventist church mesosystem are characterised by the dynamics between pastors, health leaders, and church members, reflecting the interconnectedness of various elements within the church community. Data analysis from this study reveals a noticeable gap between pastors and health leaders in their

approaches to promoting PA, indicative of a mesosystemic challenge that impacts health promotion efforts. This gap is conditioned by a combination of church-structural and cultural factors, showing the complex interplay between organisational structures and community norms.

Pastors, as gatekeepers, are expected to model the health message but are not consistently embodying it in their own lives. This inconsistency can create a disconnect between the health promotion efforts advocated by pastors and their actual behaviours, potentially influencing the attitudes and behaviours of congregants (Ayton et al., 2016; Gross et al., 2018). Additionally, pastors and health leaders express a feeling of not being adequately supported within the church community, indicating a need for greater support mechanisms. This lack of support can hinder their ability to effectively promote PA and health behaviours among church members, highlighting a mesosystemic barrier that needs to be addressed (Holt et al., 2017).

Additionally, pastors view workload as a barrier to engaging in PA and health promotion within the Adventist church. As such, the demands of pastoral duties can limit their ability to prioritise their own health and participate in health promotion activities, contributing to the gap between their advocacy for health and their personal behaviours (Amankwa, 2023; Bopp et al., 2013). Addressing these mesosystemic challenges requires concerted efforts to enhance support mechanisms for pastors and health leaders within the church community. By providing resources, training, and organisational support, the Adventist church can empower pastors and health leaders to

effectively promote PA (Abernethy et al., 2016) and lead by example in adopting healthy behaviors.

At the organisational level, church-structural factors contribute to the divergence in perspectives between pastors and health leaders. Hierarchical structures within the Adventist Church may assign distinct roles and responsibilities to these individuals, resulting in a compartmentalisation of efforts rather than a collaborative approach to health promotion. Furthermore, historical developments, including the establishment of separate ministries, further reinforce this divide, highlighting the mesosystemic influence of organisational decisions on interpersonal interactions (Wells et al., 2022a).

Cultural factors also shape interactions within the mesosystem (Santos, 2023), influencing the expectations placed on pastors and health leaders by church members. Traditional beliefs and norms surrounding health and wellness within the Adventist community may influence members' perceptions of the roles of pastors and health leaders in promoting PA. This cultural context adds complexity to interpersonal dynamics, contributing to the perceived gap between pastors and health leaders.

Moreover, historical teachings, such as those found in the writings of EGW, play a significant role in shaping mesosystemic interactions. EGW's emphasis on health and wellness principles has historically informed the roles and responsibilities of pastors and health leaders within the Adventist Church (White, 1897a). The development of different

ministries in response to these teachings further influences mesosystemic dynamics, highlighting the intersection of organisational decisions and cultural beliefs.

Addressing the gap between pastors and health leaders within the mesosystem requires a multifaceted approach that considers both church structural and cultural factors. Collaborative efforts to bridge this divide, such as joint training programmes and integrated health promotion strategies, have the potential to strengthen mesosystemic interactions and enhance health promotion initiatives within the Adventist Church community. By acknowledging and addressing the mesosystemic influences at play, the church can foster a more cohesive approach to promoting PA and overall well-being among its members.

From a religio-theological perspective within the Adventist church, the imperative to prioritise health is deeply ingrained, reflecting the belief in the holistic connection between mind, body, and soul (Health ministries, 2023). This theological foundation asserts that maintaining one's well-being is an inherent part of honouring the divine gift of life (Seventh-day Adventist Church, 2017). Although some may only give lip service to this theological tenet, leading unhealthy lives characterised by long committee meetings and long car trips, others demonstrate a genuine commitment to health by adopting activities such as cycling to address weight-related concerns. This divergence in responses to the religio-theological call for health reaffirms the nuanced ways in which individuals within the Adventist church interpret and integrate these principles into their daily lives. The intersection of theology and health behaviors

becomes a dynamic space where beliefs are translated into actions, revealing the multifaceted nature of health engagement within the Adventist church.

The Exosystems: culture of the church, policies, programs offered.

Empowering church leaders enables them to design and implement age-appropriate activities that meet the diverse needs of their members. Enhancing the skills and capabilities of church leaders through targeted initiatives offers the potential to foster positive change and encourage active participation in health-related interventions within religious communities (Wilcox et al., 2022). Notably, the only form of employment associated with the health department and the position of health leader, which is rewarded accordingly, is found at the church's head office or the parent organisation, namely the BUC. This observation is of particular significance due to the diverse nature of effectively promoting PA, and other principles of holistic lifestyle practices. Such efforts are organisationally complex, time-consuming, resource-intensive, and require strategic and tailored support to achieve desired outcomes (Brewer et al., 2020).

In general, there is a deficiency in structural and organisational support for members to participate in PA within the Adventist church. However, based on the evidence from previous studies, the implementation of an effective structural plan or initiative can have a mitigating or minimising effect on many barriers, including structural or organisational (Cooper et al., 2021). This level of implementation would ideally incorporate multiple strategies to address various challenges.

Pastors and health leaders lack formal training; and health leaders are appointed by the local church without specific qualifications relative to health promotion. Training lay people or health leaders in the church to deliver health promotion programmes is an effective approach to improve access to healthcare services, promote healthy behaviours in communities, and address health disparities (Iheanacho et al., 2021). Health leaders can become more confident and capable of delivering health promotion programs, leading to sustained behavior change and improved health outcomes in the long term.

Therefore, the relationship between health leaders and pastors requires a strengthening to achieve more impactful health promotion within the Adventist church. In fact, pastors who prioritise health and wellness messages, programmes, events, and policies within the church culture are instrumental in promoting successful relationships, not least with church health leaders and programmes (Bopp et al., 2013). A culture of health and wellness in the church can facilitate healthy behaviours and attitudes among congregants, ultimately promoting positive health outcomes. Therefore, the unwavering commitment of pastors to this endeavour and to fostering a good relationship with the health leader is crucial to achieving successful health outcomes within the church community (Tagai et al., 2019). Therefore, establishing a strong relationship between the pastor and the health leader in the church can be beneficial in equipping the health leader with the tools and resources necessary to expand the menu of the health promotion programming and assess its impact (Wells et al., 2022b). This collaboration

can lead to sustainable improvements in the health of the church congregation and the surrounding community.

The theological struggles and crises experienced by the Adventist Church in the 1800s and early 1900s played a vital role in shaping its theology and the subsequent development of the health message. Adventist congregations have adopted potluck walks as a customary practice, reflecting to some degree the church's commitment to the holistic well-being endorsed by EGW. This tradition, observed after communal lunches, typically on a Saturday (sabbath) is an organisational-level manifestation of the theological principles influencing health practices.

Embedded within the theological framework of the church, the health message holds a significant place (Douglass, 2000; General Conference of Seventh-day Adventist World Church, 2023c; McBride et al., 2021b). This means that certain historical factors may contribute to the church's emphasis on the Levitical dietary system and the tendency to reduce the health message to a single habit in many settings. These factors can be traced back to the early stages of the church's history when individuals led more physically active lifestyles and paid less attention to their nutritional intake (White, 1894b)(White, 1938). Furthermore, scholarly studies (Galvez et al., 2021; Schwingel & Gálvez, 2016) have indicated that health promotion efforts within Adventist settings often rely solely on educational approaches, lacking the provision of resources to facilitate meaningful behavior change. This approach, while informative, may not effectively translate knowledge into actionable behaviours among individuals. Therefore,



additional strategies that go beyond education must be explored and incorporated to foster sustainable and positive health outcomes within Adventist churches (Galvez, 2017).

The organisational level is further addressed through EGW's caution to ministers about their responsibility as guardians of the church to ensure that their bodies are in the best condition for service to others. The concept of a "sacred duty" and the need for ministers to participate in PA emphasise the organisational commitment to holistic health within the Adventist Church (White, 1892). Additionally, the discussion of historical factors shaping the church's emphasis on the health message, emphasise the organisational structure of the church from its initial establishment in 1863. Therefore, factors such as the early stages of the church's history, PA lifestyles, and attention to nutritional intake contribute to organisational priorities on health. Furthermore, the reliance on educational approaches for health promotion within Adventist settings reflects organisational challenges and strategies (Galvez, 2017; White, 1894a, 1938).

In the early days of the church, the pioneers, who were predominantly engaged in farming activities, did not explicitly emphasise the need for additional PA, as their daily routines already involved substantial physical exertion. EGW's advocacy for health principles stemmed from her observation that many Adventist leaders were experiencing health issues due to the consumption of unhealthy substances such as tea, coffee, and disease-ridden meat, which were commonly prepared on farm stoves (White, 1894b, 1964). Thus, the emphasis on holistic health within the Adventist

tradition can be seen as a response to the need to improve the health status of Adventist leaders and the community, while also bolstering EGW's authority. Therefore, it is crucial to approach this topic with scholarly rigour and critical analysis, considering the historical context, theological perspectives, and the influence of key figures such as EGW in shaping the discourse around health within the Adventist Church.

The Adventist Health message, deeply rooted within the organisational structure and framework of the Adventist church, serves as a guiding principle that influences various aspects of church life and community participation (Douglass, 2000; General Conference of Seventh-day Adventist World Church, 2023a; McBride et al., 2021b). Historical factors, such as the theological struggles and crises experienced by the church in the 1800s and early 1900s, played a vital role in shaping its theology and subsequent development of the health message. EGW's writings, serving as a cornerstone of Adventist beliefs, have significantly influenced the organisational emphasis on health principles (White, 1894a).

Additionally, the Adventist church operates within a broader exosystem that includes external influences such as government policies (Lumingkewas, 2021; Winslow, 2015). These external influences can impact organisational priorities, policies, and practices related to health promotion within the church community. For example, government initiatives promoting healthy lifestyles or community-wide health campaigns may indirectly influence the organisational strategies adopted by the Adventist church in promoting PA and holistic wellness.

However, despite organisational and exosystemic influences, challenges persist to transform health promotion efforts effectively into meaningful behaviour change among individuals within the Adventist community. Scholarly studies have indicated that health promotion efforts within Adventist settings often rely solely on educational approaches, lacking the provision of resources to facilitate meaningful behaviour change (Galvez et al., 2021; Schwingel & Gálvez, 2016). This organisational approach, while informative, may not effectively translate knowledge into actionable behaviours between individuals. Therefore, there is a need for additional strategies and resources to be incorporated into organisational practices to foster sustainable and positive health outcomes within Adventist communities (Galvez, 2017).

The research findings highlight a substantial disparity between the perceived significance and actual adoption of the Adventist Health message among many Adventists, especially pastors. A significant obstacle identified by pastors is the limited personal time available for engaging in PA, attributed to the demanding workload and expectations imposed by both the parent organisation and church members (Dunbar et al., 2020; Frederick et al., 2021; Heck et al., 2018). This challenge resonates with studies demonstrating a rising prevalence of burnout among pastors across denominations, including within the Adventist church. These hurdles highlight the impact of the central church culture exosystem, which moulds organisational structures, policies, and cultural norms that influence pastors' workload and time management. Recognising and addressing these contextual factors within the exosystem are vital for devising effective

interventions and strategies to promote PA within the Adventist church community (McKenzie et al., 2015a).

A possible dichotomy is seen between the notion of what is generally accepted as law and that which is referred to as guidance or message regarding the health teachings of the Adventist church. Not surprisingly, this may contribute to the variable degrees of acceptance of the health teachings of the Adventist church and the subsequent applicability or practiced lifestyle as recommended by the church. However, Adventists have promulgated what they believe are the 8 laws of health “NEWSTART” which is an acronym for “nutrition, exercise, water, sunshine, temperance, air, rest and trust as referred to in the bible (Brewster, 2023; Lestar, 2022; White Estate, 2023).

In addition to the NEWSTART principle, the General Conference (GC) which is the global head office for the Adventist church has also put together another set of health principles known as 'CELEBRATIONS.' The acronym 'CELEBRATIONS' encompasses 12 principles that also promote a healthy lifestyle. This added health principle provides another pathway to incorporating healthy lifestyle habits among Adventist members. Each letter represents a specific aspect that contributes to overall well-being. These principles are as follows.

Choices: Encouraging individuals to make conscious decisions that prioritize their health and well-being. Exercise: Promoting regular PA and incorporating movement into daily routines. Liquid: The emphasis is on the importance of hydration and the

consumption of an adequate amount of fluid. Environment: Focusing on creating and maintaining a supportive and health-promoting physical environment. Belief: Recognising the impact of personal beliefs and values on health choices and behaviours. Rest: highlighting the importance of adequate rest and quality sleep for optimal health. Air: The authors emphasise the importance of clean air and promote strategies to improve air quality. Temperance: Encourage moderation and self-control in various aspects of life, including diet and lifestyle choices. Integrity: Promoting honesty, authenticity, and ethical behavior in personal and social interactions. Optimism: Cultivating a positive mindset and optimistic outlook to improve overall well-being. Nutrition: The importance of a balanced and nutritious diet to support optimal health and vitality is emphasised. Social Support and Services: Recognising the value of social connections and access to support systems and resources for improved health outcomes (General Conference of Seventh-day Adventist World Church, 2023c).

In summary, both organisational structures and external influences within the exosystem play a significant role in shaping health promotion efforts, community participation, and individual behaviours within the Adventist church. Historical influences, theological principles, organisational structures, governance mechanisms, and external factors all intersect to shape organisational priorities and practices related to promoting PA and holistic lifestyle practices among Adventist church members.

The Macrosystems: surrounding neighbourhoods, supporting, and partnering with organisations.

Historically, the church's focus on health centred around medical missionaries, tasked with providing holistic care to the wider population. This emphasis originated from EGW'S guidance, linking health work with the gospel of the Bible (Bongmba, 2015; Ferret, 2023; Trim, 2019). EGW advocated for the involvement of pastors in the church's health department in the 1900s.

At the macrosystem level, ministers exert significant influence within religious communities, serving as exemplars of holistic well-being that integrates spiritual and physical dimensions. Research by Faries et al. (2020), Haughton et al. (2020a), Raedel et al. (2020), and Shaw et al. (2022) highlights the impact of ministers' personal commitment to health on congregants' adoption of holistic self-care practices (Faries et al., 2020; Haughton et al., 2020a; Raedel et al., 2020; Shaw et al., 2022). Embedded within historical guidance, particularly from EGW during the early twentieth century, is the imperative for pastors to merge health promotion with religious teachings, a directive that reflects broader societal values and cultural norms.

EGW's advocacy for pastors' involvement in church health initiatives (Ferret, 2023; Trim, 2019; White, 1892, 1932) speaks to the macrosystem's influence, where religious institutions intersect with healthcare paradigms. However, despite the acknowledged importance of pastors in fostering holistic health within religious communities, empirical evidence on the efficacy of pastor-led initiatives, especially in promoting PA, remains inconclusive in the current literature. In addition, the level of disparity that exist relative to the interpretation of both the bible and EGW's guidance,

highlights the level of discord among Adventists. Therefore, further exploration is warranted to illuminate how macrosystem-level dynamics shape the implementation and outcomes of pastor-led health interventions, advancing our understanding of health promotion within religious contexts.

Members of the Adventist Church holds diverse interpretations of the Bible and EGW regarding PA, leading to varied perspectives within the community. It is crucial to approach these differences systematically to better understand the multiple valid viewpoints.

In addition to the emphasis on training pastors for holistic health ministry, it is crucial to recognise the broader context within which these efforts take place. The church serves as a central hub for worship and community support (Young, 2022), exerting influence on the behaviour and well-being of its members. Despite the sedentary nature of some worship practices, attending religious services has been associated with greater longevity and better mental health in various cultures (Ahrenfeldt et al., 2023; Spence et al., 2020). Furthermore, the Adventist church has played a crucial role in cultivating a supportive network that promotes overall longevity and the adoption of healthier lifestyles (Chen et al., 2020b; Sartor & Black, 2022). However, the specific influence of the church on behavior change, particularly regarding PA, remains an area requiring further investigation and clarification within the scholarly literature.

The Adventist church has historically placed a significant emphasis on dietary practices as a cornerstone of its health message, often overshadowing the importance of PA (Banta et al., 2018; Sábaté et al., 2016). This emphasis has resulted in a potential gap in the church's approach to holistic health promotion, where an overemphasis on diet may lead to the neglect of other vital aspects such as PA.

To address this, a more balanced approach to health promotion is needed, one that recognises the importance of both dietary habits and regular PA for overall well-being (Alsulami et al., 2023; Ferret, 2023; Zhang et al., 2023). Integrating PA promotion alongside dietary guidelines within the church's health ministries and initiatives could indeed lead to a more comprehensive approach to health promotion. Such an approach would align with the church's overarching mission of promoting health and wellness within the Adventist community (General Conference of Seventh-day Adventist World Church, 2023b).

A shift towards more balanced health promotion within the Adventist church requires a greater understanding of the factors that have historically led to an overemphasis on dietary practices. These factors include the historical context of the church's health message, its reliance on vegetarianism as a key dietary practice, and the influence of influential Adventist leaders such as EGW. To achieve a more balanced approach to health promotion, it is necessary to critically examine these factors and their impact on the church's health message.



Therefore, a balanced approach to health promotion that acknowledges the importance of both dietary habits and regular PA is needed within the Adventist church. Integrating PA promotion alongside dietary guidelines within the church's health ministries and initiatives could lead to a more holistic approach to health promotion that aligns with the church's overarching mission of promoting health and wellness within the Adventist community.

The recognition of external factors that influence the motivation for PA among Adventists in the UK highlights the need for targeted intervention (Heward et al., 2007). The complexities observed in integrating religious beliefs with health practices at a broader institutional level require a strategic approach. Emphasising the role of health ministries within the Adventist church emerges as a key strategy to address these challenges (General Conference of Seventh-day Adventist World Church, 2023a). By prioritising health ministries, the aim is to provide a comprehensive framework within the BUC to navigate various dimensions of health, including PA, in alignment with the overarching mission of the global Adventist church. This initiative seeks to create an environment conducive to understanding the intricate dynamics between religious beliefs and health behaviors, thereby fostering intrinsic motivations for PA within the Adventist church.

Moreover, it is essential to recognise the historical context of the Adventist church's emphasis on holistic health and well-being, dating back to the teachings of EGW in the 1860s (Douglass, 2000; L. Kent, 2017). This historical foundation emphasises

the importance of integrating health promotion efforts into the fabric of the church at all levels, including the surrounding neighbourhood, supporting, and partnering with organisations (White, 1894b, 1897a). Additionally, given the diverse perspectives and behaviors within the Adventist church, it becomes evident that a tailored approach is necessary to address the unique challenges faced by different congregations, particularly in urban areas (Syed et al., 2023).

Furthermore, understanding the broader societal influences on health behaviours is crucial for developing effective interventions. This includes addressing environmental factors that can hinder access to PA-friendly spaces and opportunities within the church environment, especially in urban settings. Also, by acknowledging and addressing these external influences, health ministries within the Adventist church can play a pivotal role in promoting PA and fostering a culture of holistic well-being within the Adventist community, aligning with the broader mission of the global Adventist church.

## Chapter 8 Conclusion

This study aimed to examine the impact and indeed the interplay between the theology and beliefs of the Adventist church regarding PA. Noticing the divergence of factors that may or may not influence the relationship such as historical events and theological struggles, and its impact on the health message within the Adventist faith community. By delving into key periods of the denomination's history and the theological developments that emerged, we gained a deeper understanding of how these factors have shaped the Adventist theology and its subsequent influence on health-related beliefs and practices.

This study reveals three critical findings within the Adventist church in the UK. Firstly, there is a noticeable gap between religious beliefs and PA, highlighting the importance of understanding this disparity for effective lifestyle integration. Secondly, while a substantial number of Adventists engage in PA, less than half adhere to recommended guidelines, emphasising the need to identify and address barriers to compliance. Lastly, the relationship between pastors, health leaders, and the wider church membership lacks the desired reciprocity, hindering the motivation of members to embrace the church's health principles. These findings reinforce the necessity for tailored interventions aimed at bridging the gap between beliefs and PA, surmounting barriers to guideline adherence, and enhancing collaboration within the Adventist community to promote health principles successfully.

EGW, in one of her compilations, conveyed the notion that a greater number of individuals experience premature mortality due to a lack of PA and exercise as opposed to excessive fatigue. She further highlighted the prevailing phenomenon where a significant portion of the population tends to deteriorate and decline physically over time due to a sedentary lifestyle rather than succumbing to exhaustion (White, 1894b). This observation underscores the importance of regular PA in preventing premature mortality and emphasises the detrimental consequences of a sedentary lifestyle on overall health and well-being both in the Adventist church and the wider community.

The utilisation of a mixed method study enabled a comprehensive exploration of the experiences of pastors, members, and health leaders in promoting PA within the church. This approach facilitated a deeper understanding of the underlying challenges and complexities associated with integrating PA within the context of religious beliefs. It highlighted the versatile nature of motivation and demotivation towards engaging in PA, which necessitates careful consideration and tailored support to achieve desired outcomes. By employing an explorative approach, this study successfully captured the contextual basis of the phenomenon, providing valuable insights through open dialogue and uncovering important themes. These findings underscore the significance of adopting a scientific and systematic method to unravel the complexities inherent in promoting PA within religious settings.

Given the absence of formal training and resources specifically geared towards health promotion among pastors and health leaders within the Adventist church, it is

imperative to address this gap to enhance their effectiveness in promoting PA and exercise. Provision of comprehensive training programs, tailored to their roles and responsibilities, can equip pastors and health leaders with the knowledge, skills, and confidence necessary to effectively advocate for PA principles. Furthermore, fostering an organisational culture that prioritises and supports health promotion efforts, coupled with targeted interventions to address personal barriers, may contribute to increased self-efficacy and confidence among pastors and health leaders in their role as advocates for PA within the Adventist. Future research is warranted to examine the impact of such interventions and training programs on the effectiveness of pastors and health leaders in promoting health and PA within the Adventist church.

Through the analysis of the relationship between religiosity and PA, using a comprehensive analytical framework, we explored the potential association between these variables while accounting for potential confounding factors. While the results did not reach statistical significance, they offer preliminary insights into the complex interplay between religiosity and PA. The weak negative correlation observed suggests a potential trend towards slightly lower PA levels among individuals with higher religiosity scores, although caution must be exercised when interpreting these findings due to the non-significant p-value. The utilisation of descriptive statistics, nonparametric analysis, and linear regression provided a rigorous approach to investigating the research questions and ensured the scientific validity of the study.

Overall, this study contributes to the scholarly discourse surrounding the relationship between the religious beliefs of an organisation such as the Adventist church and its impact on the promotion of PA and exercise. By examining historical developments and employing rigorous statistical analysis, we have shed light on the intricate relationship between religiosity and PA. These findings provide preliminary information and serve as a foundation for further research, ultimately contributing to a comprehensive understanding of the interplay between faith, theology, and health within religious communities.

Focus group discussions highlight challenges in integrating PA within the church, calling for targeted leadership training programs that integrate scientific evidence and theological foundations. Collaboration with health professionals can enhance credibility and foster PA participation in faith-based communities.

It is important to acknowledge the limitations of this study, including the sample size, the need for further research with a larger and more diverse sample. Future research should continue to explore these aspects in greater depth, employing robust methodologies, and considering additional factors that may influence the association between religiosity and PA within the Adventist church. This study focused on one denomination, as such comparative studies between different denominations would yield important findings, adding to the literature. In addition, further studies should also look at potential factors that may play a role in the motivation for PA such as church

participation and assessing extrinsic factors that may influence members attitude to engage in PA.

Additionally, the disparity in the interpretation of biblical texts and the guidance of EGW show the complexity of incorporating religious teachings into health-related practises. Therefore, a compilation of the writings of EGW on the sum of her guidance on PA to the Adventist church may hold beneficial credence which may also inform the church's health policy. [Re]Defining the roe of health leaders and health departments with the church is imperative to strengthen advocacy and accountability among health leaders. In addition, studies (Derose et al., 2022; Dunn et al., 2021; Haughton et al., 2020a; Idler et al., 2019; Tutu et al., 2023) continue to show that a partnership between the church and external agencies regarding the promotion of PA can produce successful results in behaviour change. It is essential for the health and future of the church that leaders are empowered to lead in areas of PA and, indeed, on matters related to holistic health. this can start at the seminary level but also ensuring that pastors are given protected opportunity to attend to their physical health. The church may also benefit from a strategic framework at policy level that incorporates the collaborative efforts of both pastors and health leaders through developmental training for shared messaging.

[Re]Defining both the role of the health leader and the health ministry of the church with effective measures and tailored implementation of resources, interventions that aligns with the church's mission and philosophy would provide greater clarity on aspects of the teachings and guidance of the church among its members. Equally, health

leaders and pastors must be equipped to affect an impact on members attitude and behaviour toward PA through training on appointment for health leaders which can be on an annual basis while ensuring the required and necessary resources and support are for the sustainability of the initiative and success.

Therefore, the study suggests key recommendations for future health promotion efforts within the Adventist Church. Firstly, it emphasises the importance of involving pastors early in the conversation, recognising their influential role within religious communities. Engaging pastors from the outset can leverage their leadership and mobilization abilities for effective implementation of health initiatives. Secondly, addressing the existing gap between religious beliefs and health behaviors is crucial for developing interventions that bridge this disparity. Future research should focus on employing robust methodologies with representative samples to gain further insights into these complex associations. Additionally, efforts should be made to combat stigma related to body image and empower pastors and health leaders to confidently promote holistic well-being within the Adventist church.

### 8.1 Limitations

The study is limited in its focus on a single religious organisation, the Adventist church in the UK, which may restrict the generalisability of the findings to other religious contexts. The unique characteristics and practises of the Adventist church may not fully represent the perspectives and experiences of individuals in different religious



organisations. Additionally, the sample sizes of the interviews and focus groups were relatively small, potentially limiting the range of perspectives captured. While the quantitative phase yields insights into the connection between Adventist beliefs and PA in the UK, caution is needed in extrapolating these findings to diverse Adventist communities. The regional focus may restrict applicability due to potential variations in cultural, environmental, and socio-economic factors. Thus, the results should be interpreted within the studied context, and generalizability to broader Adventist populations may be constrained. Future studies should aim for wider geographic representation to enhance external validity.

It is important to approach the findings of this study with caution, considering the limitations associated with a self-selected sample. It is likely that people who felt satisfied with their PA levels were more inclined to participate in the survey, which could lead to an over-representation of those who already exercised regularly. Future research endeavours should also consider replicating similar studies in different Adventist populations to enhance the external validity and generalisability of the conclusions. Caution should be exercised when interpreting the findings, as they may not encompass the full diversity of views within the global Adventist denomination. Future research involving multiple religious organisations and larger sample sizes would enhance the generalisability of the findings.

### 8.1.1 Recommendations

The findings of this study have important implications for practice and religious organisations in promoting PA programmes. Based on the insights gained, several recommendations can be made:

#### **Tailored Interventions**

- Develop interventions that address specific barriers and facilitators of PA within religious organisations, such as the Adventist Church.
- Consider the unique needs and concerns of individuals within the religious community to promote and encourage regular PA.

Culturally tailored interventions have been shown to improve PA outcomes (Bantham et al., 2021; Majee et al., 2022).

#### **Education and Training Programmes**

- Implement education and training programmes for pastors, health leaders, and other influential individuals within religious organisations.
- Equip these individuals with knowledge, skills, and confidence to advocate for and implement health promotion initiatives.

Effective leadership training in health promotion within the context of the church setting, can significantly enhance the promotion of PA and other health behaviours (Chen et al., 2020b; Sidibé et al., 2019).

#### **Organisational Support**

- Provide strong organisational support to create an environment that values and encourages PA.
- Incorporate PA opportunities into regular church activities, such as exercise breaks during gatherings and organising active community events.

Organisational support is crucial to sustain health promotion initiatives (Stowell et al., 2020; Wells et al., 2022b).

### **Partnerships with Healthcare Organisations**

- Establish partnerships between churches and healthcare organisations to collaborate on health promotion programmes, such as PA.
- Leverage the strengths of both entities to effectively promote PA and improve health outcomes.

Successful collaborations can enhance program reach and impact (Addison et al., 2015; Seaton et al., 2018).

### **Accessible Facilities**

- Ensure that PA facilities are accessible and available to all members of the community.
- Provide and maintain exercise facilities that are easily accessible for all congregants.

Accessibility significantly influences PA engagement (El Masri et al., 2020; Meredith et al., 2023).

### **Community-Focused Interventions**

- Develop community-focused interventions that take advantage of the central role of churches in some communities.
- Position churches as hubs for community health initiatives to promote active lifestyles and improve overall community health.

Community-based approaches are effective in increasing PA levels (Gwathmey et al., 2024; Sharpe et al., 2018). **Further Research**

- Pursue additional scholarly investigations to explore the complex interplay between religious beliefs and PA.
- Consider religious activities as potential mediators and explore alternative measurement instruments for assessing PA during leisure time.

Nuanced research approaches are essential for a comprehensive understanding of the relationship between religious faith and PA behaviour (Hussain & Cunningham, 2023; Koenig, 2012).

By implementing these recommendations, religious organisations can actively promote PA and contribute to the general health and well-being of their members. Integrating PA programmes into religious practices is consistent with holistic health principles and supports people in adopting and maintaining a healthy and active lifestyle.

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Table summary of Literature review studies

Citation	Behavioral Outcome	Research Design	Participants	Settings	Intervention	Outcome
Young & Stewart (2006)	PA/exercise participation, fitness, BP, weight	6-month RCT intervention	African American Women (n=196)	African American churches in Baltimore	Aerobic exercise group: 1-hour weekly exercise class for 6 months. Stretching group: low-intensity stretching classes and health lectures	Both groups showed a decrease in physical inactivity, but no significant differences between the aerobic exercise and stretching groups
Bopp et al. (2011)	Exercise (general knowledge of PA)	16-week RCT intervention	Adult Latino church members (n=47)	Roman Catholic Churches in Kansas	Culturally and spiritually relevant education materials and activities promoting the health benefits of PA. Comparison group received general health information	Participants in the intervention group demonstrated greater knowledge and awareness of the benefits of exercise
Whitt-Glover et al. (2008)	Self-reported PA (pedometer), BP	1-group Pre-/post- 8-week intervention	Sedentary Black adults (n=87)	Predominantly Black Churches in North Carolina	Eight weekly group sessions involving moderate-intensity PA	Significant increases in steps per day after 4 and 12 weeks, along

					and discussions on the benefits and barriers of PA, along with prayer sessions and culturally sensitive approaches	with notable changes in moderate and vigorous PA levels
Perez et al. (2022)	Park uses and PA levels among church members	Cross-sectional research design	Latino adults (n=373)	Six churches in the city of Los Angeles CA	PA social support, PA social norms, perceived park quality and concerns, and church PA programming	Park quality and concerns were positively associated with park use near the church, and church PA programming was positively associated with park-based PA. None of the factors were related to accelerometer-based moderate-to-vigorous PA (MVPA) or meeting PA recommendation
Duru et al. (2010)	Exercise (Walking) self-report (pedometer), Systolic blood pressure (SBP)	RCT with 8-week intervention sessions	Older sedentary African American women (n=71)	Three largely Black churches in Los Angeles	Both groups met for 90-minute meetings twice per week for 8 weeks, involving PA sessions and faith-based	Significant increase in walking (weekly step count) and a decrease in SBP

					PA theory sessions	
Manget & Sands (2008)	Muscular strength, flexibility, aerobic fitness endurance, BP, HR, waist to hip ratio, Cholesterol	Pre- and post-test 12-week exercise and nutrition intervention	Adult ( <i>n</i> = 42) participants (male, <i>n</i> = 14; female, <i>n</i> = 28; Mean age= 49.93)	Not Known	90-minute sessions for 12-weeks of nutrition counselling, meal planning, PA, flexibility exercises, muscular strength training, and goal setting. Presentations on spiritual accountability	Reduction in hip to waist circumference and ratio, increased aerobic endurance, reduction in weight, body fat percentage. Increased upper body strength, flexibility. Improvements in BP, HR, and blood glucose.
Arrendondo et al 2022	Self-report PA (accelerometer/ steps/day, moderate to vigorous PA)	RCT, compared PA intervention condition churches( <i>n</i> =8) with cancer screening conditions churches ( <i>n</i> =8)	Church going Latinas women ( <i>n</i> =436)	16 Latino Catholic churches	Anthropometric measurements at first 2 appointments. 12-hours per day accelerometer test of MVPA. Three 30-min motivational interview calls for first 12 months. 2 walking groups, 2 cardio dance classes, 2 strength-training classes. Classes	Increased MVPA, BMI decreased.



					started with prayer. Monthly health handout reviewed after each session.	
Gross et al 2021	Self-reported perceptions of PA health promotion. Health ministries and pastoral support	RCT churches (n=31)	African American churches including pastors and health ministry's departments.	14 Baptist churches, 11 Nondenominational, 3 African Methodist Episcopal church, 1 Christian Methodist Episcopal church 1 Pentecostal church 1 Adventist	Faith-integrated PA program, non-faith-integrated PA program, or self-guided program. The interventions aimed to increase and maintain PA levels among low-active African American women	Increased awareness of pastoral and health ministry's support impact in PA promotion
Bernhart et al 2021	Self-reported levels of PA and nutritional intake	Churches (n=132) 12-month intervention program	African American churches members (n=893)	132 African American churches	12-month follow-up implementation of the 4 components for PA and healthy eating. FAN coordinator reports of 12-month implementation of each of the components increased	Improved PA behaviour

					from baseline practices. Second, FAN coordinator reports of 12-month implementation	
Martinez et al 2016	10 pre-/post-intervention focus groups	12-week program Implementation of pre-/post-intervention focus groups.	African American church members	African American churches in Tennessee (n= 20) and South Carolina (n= 20)	30 min per day of moderate-intensity PA at least 5 days a week, and two 20-min strength-training sessions.	Improvements in emotional health, quality of life. Increased awareness in healthy eating and PA habits
Arredondo et al (2017)	12-month PA intervention effects	6-year PA intervention/cancer screening comparison	Latinas (n= 436)	16 Catholic churches in San Diego California	Accelerometer-based MVPA	Increasing MVPA and decreased body mass index among participants
Feiler & Ngo (2022)	PA levels & HLOC	Comparative analysis of PA levels and HLOC among the two groups	Adult Adventist and Non-Adventist (n= 185)	Adventist higher education facility	Survey/Questionnaires	Adventist had lower PA levels than Non-Adventist

## Appendix B Survey Information Sheet

Adventist religion and  
PA /Exercise Questionnaire

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### DEMOGRAPHIC DATA

Q1

#### **INFORMATION SHEET**

Study Title: The Role of Adventist religion relative to PA /Exercise **Introduction**

The "Seventh-day Adventist" (Adventist) Church is globally recognised for its work and mission in relation to health and wellbeing. This is further evident in its teachings and various mandates relating to healthy lifestyle practices that are included within its fundamental beliefs. We are conducting a study to find out what role the Adventist beliefs play in relation to PA or exercise among Adventist members.

So, one of the things we would like to know is what aspects of the Adventists' religious beliefs influences the motivation to engage in regular exercise or demotivates members to be physically active. To do this, we would like to invite you to fill out a short questionnaire.

#### **What's involved?**

You will see that it has two parts. In the first part, we ask you for some demographic information which includes the Conference or Mission your church is registered with. We need this information so that we can make possible comparisons with other Conferences or Mission. To maintain your privacy your name is not required. In the second part, there are some short questions which we would like you to answer as honestly as possible. Remember that there are no 'wrong' answers, and nobody apart from the researchers will ever know how you responded to the questions.

#### **What are the benefits and disadvantages of taking part?**

Your participation will help to understand the level of connection that may exist between ones' religious beliefs and living a physically active lifestyle. There is no real

advantage to you as an individual, but the information we gather will assist the church to reach out better to its members on aspects relating to PA or exercise which is fundamental to health. The only possible disadvantage is that you may find some of the questions a bit upsetting. If this happens, we suggest that you stop filling out the questionnaire. If you continue to feel distressed, you may want to talk it over with your minister or a member of the pastoral team.

### **What will happen if I don't want to continue with this study?**

You are free to leave the study by not submitting the questionnaire. However once the data is submitted you cannot withdraw because it is anonymised.

### **How will my information be kept confidential?**

The questionnaire is completely anonymous. The information will be kept separately so that nobody can identify who gave what answers. The information on the forms will then be transferred to a secure database, and all the information from the questionnaires will be kept securely for 10 years in accordance with university regulations. It will then be destroyed.

Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR).

The data controller for this project will be Staffordshire University. The university will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under the GDPR is a 'task in the public interest'. You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

You have the right to access information held about you. Your right of access can be exercised in accordance with the GDPR. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the Staffordshire University Data Protection Officer. If you wish to lodge a complaint with the information Commissioner's Office, please visit [www.ico.org.uk](http://www.ico.org.uk)

### **What will happen to the results of this study?**

No individual results will be released. The overall conclusions will be written up in the thesis and in a paper for a research journal. Recommendations from the general findings will also be written to the Adventist governing body in the UK.

### **Further information and contact details**

This study has been reviewed and approved by the University Research Ethics Committee

If you have any further questions or concerns about this study, please contact either Hezron Ottey (Researcher) or Peter Kevern (Research supervisor). Their contact details are given below.

If you would like to discuss any concerns about or receive advice on how to support a person in their religious beliefs and PA in your church, then we suggest you contact your minister or a member of your pastoral team. For more general information, please contact the BUC of "Seventh-day Adventists" at the web address given below

### **Contact details**

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[Contact us :: Adventist in UK and Ireland | National Site](#) [info@adventist.uk](mailto:info@adventist.uk)

Appendix C Survey consent form

CONSENT FORM

**Title of Study:** The Role of Adventist religion relative to PA or exercise

**Name of Researcher:** Hezron Ottey

**Participant number:**

1. I confirm that I have read and understood the Information Sheet for the above study. I have had the opportunity to consider the information, ask questions, and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I can withdraw my participation by not submitting the questionnaire. I also understand that after submission I cannot withdraw my information because the information is anonymous
3. I understand that individuals from Staffordshire University may look at relevant sections of data collected during the study, where it is relevant to my participation in the research.
4. I understand that anonymised data from the questionnaire may be used in the study report and subsequent publications.
5. I agree to take part in the above study

YES (4)

---

Page Break

Appendix D Religiosity Scale (BIAC)

**Belief into Action Scale**

Circle a single number for each question below:

**1. Please circle the highest priority in your life now? (most valued, prized)**

1. My health and independence      2. My family      3. My friendships      4. Job, career or business  
 5. My education      6. Financial security      7. Relationship with God      8. Ability to travel & see the world  
 9. Listening to music and partying      10. Freedom to live as I choose

**2. How often do you attend religious services? (circle a number below)**

		Couple	Every	About	Several	About	Every
More than		times/yr	few mos	once/mo	times/mo	every wk	week
Never	Rarely	Daily					
	once/wk						

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8	9	10	1	2	3	4	5
						6	7

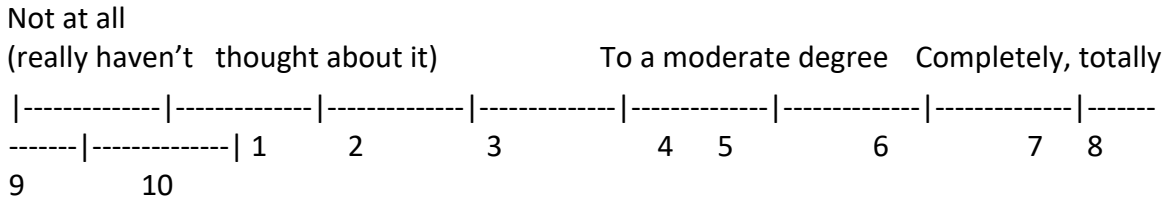
**3. Other than religious services, how often do you get together with others for religious reasons (prayer, religious discussions, volunteer work, etc.)?**

		Couple	Every	About	Several	About	Every
More than		times/yr	few mos	once/mo	times/mo	every wk	week
Never	Rarely	Daily					
	once/wk						

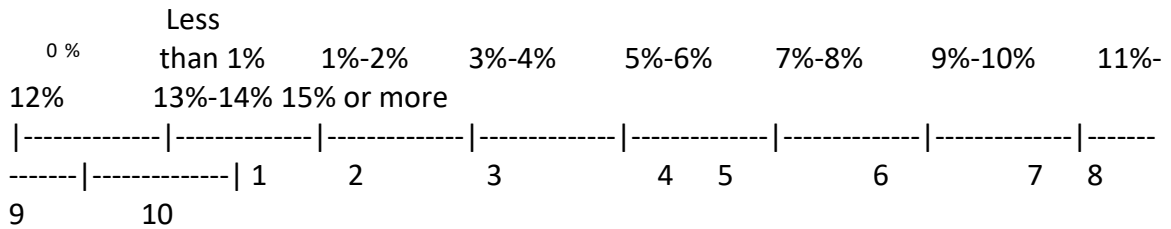
  

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8	9	10	1	2	3	4	5
						6	7

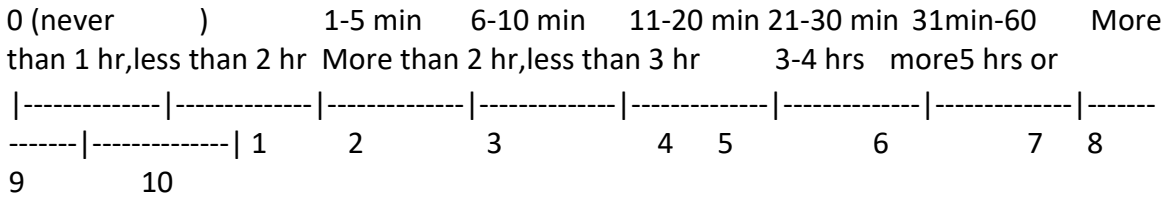
**4. To what extent (on a 1 to 10 scale) have you decided to place your life under God's direction?**



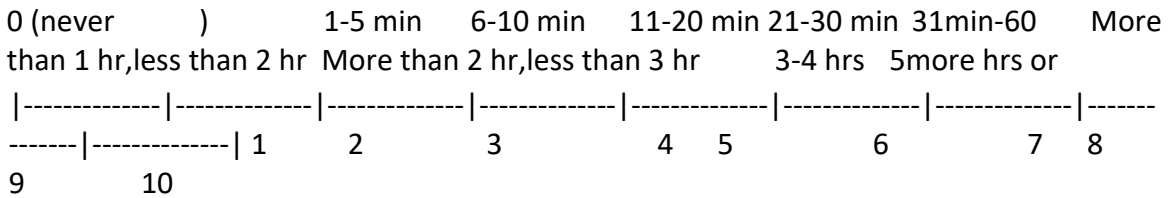
**5. What percentage of your gross annual income do you give to your religious institution or to other religious causes each year?**



**6. On average, how much time each day (in 24 hrs) do you spend listening to religious music or radio, or watching religious TV?**

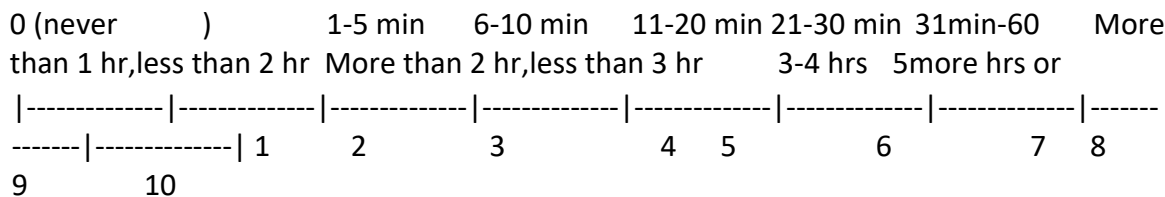


**7. On average, how much time each day do you spend reading religious scriptures, books, or other religious literature?**

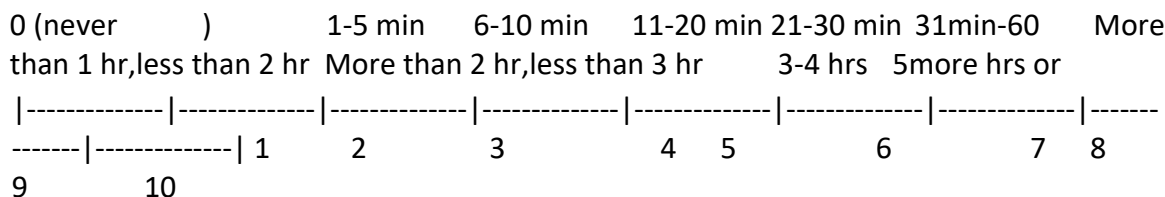




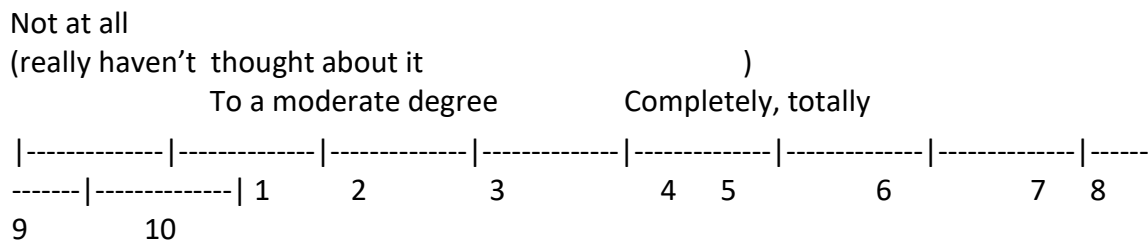
**8. On average, how much time each day do you spend in private prayer or meditation?**



**9. On average, how much time each day do you spend as a volunteer in your religious community or to help others for religious reasons?**



**10. To what extent (on a 1 to 10 scale) have you decided to conform your life to the teachings of your religious faith?**




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**Scoring instructions:**

(1) Recode Q1 as follows: 7=10, all other answers=1 (2) Sum recoded Q1 + Q2 through Q10 to arrive at total score (range 10-100)

Appendix E Physical Activity Scale

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Q24 Do you have a regular exercise program?

Yes (1)

No (2)

---

Q25 During your regular exercise, how hard does it feel most of the time?

▼ Very light (1) ... I do not exercise regularly (7)

---

Q26 How many times per week do you usually engage in regular vigorous activities, such as brisk walking, jogging, bicycling, etc.; long enough or with enough intensity to work up a sweat, get your heart thumping, or get out of breath?

▼ Never engage in activities this vigorous (1) ... 6 times per week (8)

---

Q27 On average, how many minutes do you exercise each session? Choose the best answer.

▼ None (1) ... More than 1 hour (8)

---

Q28 Do you walk, run or jog as part of a PA program? (include these same activities when they are performed on exercise machines).

Yes (1)

No (2)

---

Q29 How many of these “walk” or “run” or “jog” workouts do you usually do per week?

▼ Less than once/week (1) ... 6 times per week (7)

---

Q30 How many miles do you average per “walk” or “run” or “jog” workout? Please mark the nearest category below.

▼ ¼ mile or less (1) ... 4 or more miles (7)

Q31 What is your average time spent in each “walk” or “run” or “jog” exercise session (excluding rest stages)?

▼ 10 minutes or less (1) ... More than 1 hour (7)

Q32

How much time do you spend Napping (do not include regular night's sleep)

	Never do (1)	Less than 20 min (2)	20-39 min (9)	40-59 min (10)	At least 1 but less than 2hrs (11)	At least 2 but less than 3hrs (12)	At least 3 but less than 6hrs (13)	More than 6hrs (17)
On a usual weekday (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Saturday (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Sunday (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33 How much time do you spend Lying down (watching tv or reading while lying down)

	Never do (1)	Less than 20 min (2)	20-39 min (3)	40-59 min (4)	At least 1 but less than 2hrs (5)	At least 2 but less than 3hrs (6)	At least 3 but less than 6hrs (7)	More than 6hrs (8)
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On a usual weekday (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Saturday (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Sunday (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q34 How much Time do you spend on Moderate activity- such as  
 Leisure: Fast walking, golfing, sailing, casual cycling, swimming leisurely  
 At work: Fast walking, repeated lifting of objects up to 15lbs, carpentry, patient care  
 House/yard work: Vacuuming/mopping, active child care, house painting, gardening,  
 repeated lifting of objects up to 15lbs

	Never do (1)	Less than 20 min (2)	20-39 min (3)	40-59 min (4)	At least 1 but less than 2hrs (5)	At least 2 but less than 3hrs (6)	At least 3 but less than 6hrs (7)	More than 6hrs (8)
On a usual weekday (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Saturday (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Sunday (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q35 How much time do you spend on Vigorous Activity- such as  
 Leisure: Moderate running/jogging, faster/harder cycling, team sports, aerobics,  
 vigorous lap swimming calisthenics  
 At work: Patient lifting, repeated lifting of objects 20-35lbs  
 House/yard work: Repeated lifting of objects 20-35lbs

	Never do (1)	Less than 20 min (2)	20-39 min (3)	40-59 min (4)	At least 1 but less than 2hrs (5)	At least 2 but less than 3hrs (6)	At least 3 but less than 6hrs (7)	More than 6hrs (8)
On a usual weekday (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Saturday (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Sunday (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q36 How much time do you spend on Extremely Vigorous Activity- such as  
 Leisure: Fast running, heavy weight lifting, marathon,  
 At work: Digging, working with heavy tools, repeatedly lifting or carrying 40+lbs  
 House/yard work: Continuous digging, carrying 40lbs or more

	Never do (1)	Less than 20 min (2)	20-39 min (3)	40-59 min (4)	At least 1 but less than 2hrs (5)	At least 2 but less than 3hrs (6)	At least 3 but less than 6hrs (7)	More than 6hrs (8)
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On a usual weekday (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Saturday (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a usual Sunday (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

-----  
Page Break

Q37

Does your church have a health department?

Yes (1)  No (2)  I don't know (3)

-----

Q38 Does your church conduct regular PA /Exercise programs?  Yes (1)

No (2)

-----

Q39 I believe that PA is essential to my physical health  0 (0)  1 (1)  2 (2)  3 (3)

4 (4)  5 (5)  6 (6)  7 (7)  8 (8)  9 (9)

10 (10)

-----

Q40 How well do you believe you integrate this value in your daily life?

0 (0)  1 (1)  2 (2)  3 (3)  4 (4)  5 (5)  6 (6)  7 (7)  8 (8)  9 (9)

10 (10)

-----

Q41 How much do you value exercise or PA in your daily life?

0 (0)  1 (1)  2 (2)  3 (3)  4 (4)  5 (5)  6 (6)  7 (7)  8 (8)  9 (9)  
10 (10)

---

Q42 Do you think the church is an appropriate place to discuss PA and Exercise topics?

YES (1)  NO (2)  DEPENDS (3)

Appendix F Physical Activity Recode Scoring.

**Scoring instructions: for PA Scale**

RECODE Ex ModVigWk (1=0) (2=.5) (3=1) (4=2) (5=3) (6=4) (7=5) (8=6) INTO

#TimesExerPerWeek.

RECODE ExVigMin (1=0) (2=5) (3=15) (4=25) (5=35) (6=45) (7=55) (8=65) INTO

#MinutesPerSession.

COMPUTE ExerciseMinPerWeek = #TimesExerPerWeek \* #MinutesPerSession.

None= 0 minutes; < 20 minutes = 5; 11 to 20 minutes = 15; 21 to 30 minutes = 25; 31 to 40 minutes = 35; 41 to 50 minutes = 45; 51 to 60 minutes = 55; > 60 minutes = 65. The weekly frequency of each session was scored as: never do = 0; 1 time per week = .5; 2 times per week = 1; 3 times per week = 2; 4 times per week = 3; 5 times per week = 4; 6 times per week =5; 7 times per week = 6.



Appendix G Descriptive PA & Religiosity Statistics information

**Table 8.** Descriptive Statistics for PA and Religiosity

	<b>PA</b>	<b>Religiosity</b>
Adherence to routine	55% consistently engaged in regular PA	
Intensity level	33% perceived it as "somewhat hard" (moderate)	
Frequency of vigorous activities	19% engaged three times a week (e.g., running, walking, cycling)	
Minutes per exercise session	15.5% spent 31-40 minutes per session	
	14.5% spent 21-30 minutes per session	
	12% spent over one hour in each session	
	8% did not engage in any PA	
Exercise activities	Walking, running, and jogging were common choices	
Weekly distance covered	Majority covered up to 3 miles per week, smaller group covered 4 miles or more	
Moderate activity	Higher activity levels on typical weekdays	
	43.3% did not exercise on a typical Saturday	
Vigorous exercise activities	Small proportion (12%) engaged in vigorous exercise, mostly on Sundays	
	Majority did not participate in vigorous exercise on Saturdays	

Extremely vigorous activity	Less than 5% on usual Saturdays, less than 6% on usual Sundays	
	9.5% engaged in extremely vigorous exercise on a usual weekday	
Main priority		61% prioritized their relationship with God
		22% prioritized family
		9% prioritized health
Attendance at religious services		39.7% attended once a week
		25% attended more than once per week
Religious giving		53% regularly gave 9%-12% of their wage to the church
		21% gave up to 15% of their gross annual income to the church
Non-religious organization		26.5% watched religious programs on TV or listened to the radio for 31-60 minutes
		31-60 minutes spent reading religious materials
Private religious practice		24% spent 21-30 minutes on average each day for prayer
Volunteering		Majority did not volunteer, but attending religious services is associated with higher volunteering rates

FOCUS GROUP QUESTIONS & GUIDES

Topic target	Focus group question
<p>Pastors and Health leader’s perspectives on the health message and health promotion</p>	<ol style="list-style-type: none"> <li>1. Some Adventists say only certain aspects of the health message (approximately 10%) is emphasised in the church and PA or exercise is not one of them.                             <p><u>Probes:</u></p> <ol style="list-style-type: none"> <li>a. If you agree/disagree {first statement}, “why” do you think this is the case, and what do you think can be done to change this view?</li> <li>b. How would you describe your own perspective of health in then church?</li> </ol> </li> <li>2. Members also say both pastors and health leaders working together with health promotion would greatly impact the church’s attitude towards the health message.                             <p><u>Probes:</u></p> <ol style="list-style-type: none"> <li>a. How can pastors and health leaders work more <b>collaboratively</b> to influence the church to be more physically active or engage in exercise?</li> <li>b. Describe the components needed to support [pastors] and [health leaders] in</li> </ol> </li> </ol>

	effective health promotion?
Pastors and Health leader's perspectives on the health message and health promotion	<p>3. If you, [pastors], [health leaders] were to assess the health status of church members, how would you do so?</p> <p><u>Probes:</u></p> <ul style="list-style-type: none"> <li>a. Describe how you would respond to the health needs of the church.</li> <li>b. In your understanding, how does the health message and health promotion <b>connect</b> with the mission of the church? and how can this knowledge be delivered to church members?</li> <li>c. How would you incorporate the beliefs of the church into physical health and activity?</li> <li>d. How can pastors and health leaders <b>maintain</b> a collaborative approach to effective health promotion in the church?</li> </ul>
General question	<p>4. Is there anything else that you would like to share on the topic before we end the focus group session?</p>



**Responses to Role Adventist beliefs, Values, and Practices in PA Project**

**Participant Information Sheet**

**Introduction**

My name is Hezron Ottey, and I am a Researcher/PhD student in the School of Health, Science and Wellbeing at Staffordshire University. I would like to invite you to take part in an online (virtual) focus group discussion for health leaders and pastors, exploring your views, ideas and perspectives on the health message and health promotion in the Adventist. Before you decide whether to participate, I would like to explain why this research is being conducted and what participation would mean for you. We can go through this information sheet together and you can ask any questions that you might have. This should take about 10 minutes. You might also find it helpful to talk to other people about this research before deciding whether to participate.

The previous phases of the study (qualitative, interviews and quantitative, surveys) appear to show that the health promotion of the health message may not be having the necessary effect among church members. Thus highlighting the importance of the potential influence from a more collaborative approach among pastors and health leaders.

In addition, focus groups discussion play an important role in qualitative research and is recognised as an effect method for collecting data that explores participants' opinions, experiences, and perspectives. Typically, there will be 6-8 participants in the session lasting between 40 and 90 minutes.

**What is the purpose of the study?**

The study will establish effective health promotion strategy and delivery of the health message from among health leaders and pastors within the Adventist. thereby addressing the issues as highlighted in the previous study which indicated the necessity for elements of change in the way this is done and the ways in which pastors and health leaders can develop a more impactful, collaborative approach to health promotion relative to PA and exercise. Hence, you are invited to discuss questions that are pertinent to the exploration of this topic.

**Why have you been invited?**

You have been invited to participate in this virtual focus group session to help develop an understanding of the potential tools, approach, and proposal for more effective collaborative health promotion among pastors and health leaders.

**Do you have to take part?**

If you do not wish to take part in this study that is fine, and no explanation will be required. Participation in the study is entirely voluntary. In addition, if you offer to take part but change your mind then you can withdraw from the process at any stage and no explanation will be required.

**What will happen to you if you take part?**

This is essentially a conversation between all participants. It will be a flexible and informal process: during this meeting you will have the opportunity to raise matters regarding your understanding and interpretation of the factors involved in health promotion and health message relative to exercise or PA . I will have some questions that are relevant to the aim of the group discussion, but the focus is on giving you an opportunity to discuss aspects that are important to you regarding this subject as it relates to health promotion. The session will also be audio recorded with your consent.

**What are the possible disadvantages and risks of taking part?**

The risk is extremely minimal; however, you may have experienced some personal difficulties regarding your health that challenges your own religious views.

**What are the possible benefits of taking part?**

Your contribution may help to develop a better understanding of how both leaders (pastors and health leaders) can collaborate more effectively to better motivate church members to engage in PA and deliver a better, more balance health promotion message. You may also develop a greater understanding of how the Adventist Health message and teachings, specifically in the context of PA or exercise behaviour connects to the doctrines of the church. You might also enjoy experience of this type of collaborative work with other members. If you wish, I would be pleased to meet with you when the research is completed to discuss the findings.

**Will my participation be kept confidential?**

The transcript of the session will have all personal details removed and will be kept in a secure folder on the university's online network. The data will be kept for ten years, then destroyed.

Although, we would like to use direct quotations from the session in published papers to inform others of your experience, we will make sure that there is nothing in your words that would make you identifiable.

Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR).

The data controller for this project will be Staffordshire University. The university will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under the GDPR is a 'task in the public interest'. You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

You have the right to access information held about you. Your right of access can be exercised in accordance with the GDPR. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the Staffordshire University Data Protection Officer. If you wish to lodge a complaint with the Information Commissioner's Office, please visit [www.ico.org.uk](http://www.ico.org.uk).

#### **What happens if I disclose something that may need reporting?**

If you disclose an issue related to risk or harm to yourself or others which may need reporting, discussion will be had about an appropriate and proportionate response to that information which may include informing the local authority or offering advice to seek professional intervention and certainly reporting it to my supervision team.

#### **What will happen to the results of this study?**

The data gathered during this study will be analysed and submitted for publications later in any relevant journals. It is also anticipated that the findings of this study will be disseminated through oral presentations delivered at events, seminars and conferences as well as the final thesis publication

#### **What if there is an issue?**

If you find any aspect of this research upsetting, then this can be raised with the researcher interviewing you and the supervision team. If identified and additional support is required a discussion will be had with the participant and my supervision team notified for further direction. If you have concerns about any aspect of this study, you contact my supervisor Dr Kevern using the details provided below, who will endeavour to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Director of Research, whose details are also given below.

#### **Who has reviewed this study?**

All research is looked at by a group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given a favourable opinion by the ethics panel at Staffordshire University.

Thank you for taking the time to read this. It is hoped that the information provided above clearly answers any questions you may have about this study. However, should you have any further queries or require additional information, please do not hesitate to contact me. You can also contact Dr Tim Horne whose details are located below if you wish to discuss participation with someone independent of the research process.

*Researcher Contact Details*

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### CONSENT FORM

**Title of Study:** The role that Adventist(SDA) beliefs, and values play in PA or exercise behaviour.

**Name of Researcher:** Hezron Ottey

**Participant number:**

**Please initial box**

1. I confirm that I have read and understand the Information Sheet dated [...] (version 1.0) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical or legal rights being affected.

3. I understand that individuals from Staffordshire University may look at relevant sections of data collected during the study, where it is relevant to my participation in the research.

4. I understand that anonymised data from the focus group discussion may be used in the study report and subsequent publications.

5. I agree to the use of audio recording.

6. I agree to take part in the above study.

\_\_\_\_\_  
Name of Participant                      Date                      Signature

\_\_\_\_\_  
Name of Researcher                      Date                      Signature