University of Reading

Maladaptive Representations of Religious Beliefs as Cognitive Schemata: Exploring Associations with Depression and Anxiety and potential clinical implications

A PHD THESIS

School of Psychology and Clinical Language Sciences

Taregh Shaban (student number:)

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Declaration

I declare the use of ChatGPT (https://chat.openai.com/) to refine phrases that I created in order to improve the academic style and accuracy of the language used. I also used the programme to check for potential grammatical structure, punctuation and vocabulary errors. However, the output was modified further to better represent my own tone and style of writing.

I therefore confirm that this is my own work and the use of all materials from other sources has been cited using Zotero open-source reference software to manage the citation process.

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Abstract

This thesis comprises four studies designed to answer the central research question: Are there identifiable religious schemata within the conservative Muslim population that may be conferring vulnerabilities to experiences of depression and anxiety?

Study 1, reported in Chapter 2 is a pilot study evaluating the Socratic Dialogical Interpre-view (SDI-v). This method synthesises Cognitive Behavioural Therapy's Socratic dialogue with Dinkins' Socratic Hermeneutic 'Interpre-view'. Conducted with three Muslim participants, the study explored the cultural acceptability and effectiveness of SDI-v in eliciting core religious belief. The findings indicated that the technique was acceptable to the Co-inquirers, demonstrating its potential feasibility for the target Muslim population. Analysis of resulting interview data also revealed that the SDI-v effectively identified theocentric core beliefs and related cognitive structures suggesting its potential as a useful tool for exploring Muslim religious beliefs in a mental health research context. This pilot established the groundwork for the use of the SDI-v with a broader sample and provided the reassurance needed for the appropriateness of the technique in the current cultural environment.

Having established the utility and feasibility of the SDI-v, the second study built upon the foundational work of Study 1 by applying the interview technique to a broader sample of sixteen Muslim Co-inquirers. This second qualitative study explored the structure and content of religious schema through the SDI-v and subsequently scrutinised the data using template analysis. Findings uncovered a robust religious schema marked by negative beliefs and emotions, stable from childhood through adulthood yet showing some developmental evolution. This study, discussed in detail in Chapter 3, not only set the stage for the subsequent research but also provided necessary data for the development of the Religious Schema Questionnaire (ReSQue)

The third study, presented in Chapter 4, significantly advances the field with the creation and validation of a Religious Schema Questionnaire (ReSQue) specifically tailored for a Muslim population. This three-phased study began with generating items from interview data collected in the previous study. The initial stage also involved a cultural acceptability process for the two questionnaires' items, and a rigorous translation procedure. The subsequent exploratory factor analysis examined data from 174 university students, leading to two 18-item versions of the ReSQue (childhood and adulthood) that substantially mirrored each other. The final phase confirmed the factor structure of both versions of the questionnaire using data from 250 participants. Subsequent reliability and validity tests provided further support for the psychometric robustness of the ReSQue reinforcing this unique measure's importance for assessing religious schemata especially in conservative Muslim populations.

The final study (Chapter 5) examined the relationship between maladaptive religious schemata, measured by the ReSQue, and symptoms of depression and anxiety in 250 participants. Logistic regression showed significant and high probabilities of reporting above cut-off for depression and anxiety given high scores on both versions of the ReSQue. Moreover, the influence of various ReSQue subscales sometimes varied across the C-ReSQue and A-ReSQue, suggesting some age-related differential impact. The findings have a number of clinical implications including the importance of assessing for religious schemata particularly among religious individuals experiencing anxiety and depression, and the significance of considering age and schema developmental stages when designing interventions.

A more detailed exposition of the key clinical implications and recommendations drawn from the preceding studies was reflected upon and discussed in the final and concluding Chapter 6. These recommendations included the need for incorporating religious and spiritual components into Cognitive Behavioural Therapy assessments and formulations, with two models based on study data proposed to aid this process. The application of minor adaptations to cognitive and schema-focussed techniques such as cognitive restructuring and imagery dialogue were also suggested as potentially effective interventions for modifying maladaptive religious schemata. This chapter further emphasized the critical role of therapists' understanding of clients' religious traditions and the strategic use of scriptural sources over other religious materials. Finally, interdisciplinary collaboration was recommended underscoring the value of combining religious understanding with mental health expertise for a more comprehensive approach to care.

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CHAPTER 1: Introduction, Theoretical Framework, and Literature Review

Overview of Chapter 1

The present thesis aims to investigate the relationship between maladaptive representations of religious beliefs and common mental health problems in a sample of Muslims residing in the Arabian Gulf. The investigation utilizes a Cognitive Behavioural Paradigm (CBP) based schema model to explore this link. The following introduction and literature review will draw on a broad range of research in the fields of religion and mental health, and religion and Cognitive Behavioural Therapy (CBT), with particular focus on their application to indigenous Muslim populations.

This introductory chapter is divided into three parts: part one outlines definitions for terms and constructs central to the thesis. To provide context for the reported studies, part one also describes the population and geographic location in which the research is carried out. Part one then introduces literature on religiosity and mental health in general, before focussing specifically on research on religion's impact on depression and anxiety. A crucial distinction is made between Islam as a religion, and Muslims, adherents to this religion, prior to discussing data on rates of religiosity in the predominantly Muslim Middle East and North Africa (MENA) region. The subsequent section initially presents data on mental disorders in the MENA then concentrates on depression and anxiety in the region both before, and during, the COVID-19 pandemic. Importantly, the discussion draws comparisons between prevalence rates of these two common mental disorders in the Arabian Gulf region and other parts of the world. The issue of religiosity in the region coupled with the prevalence rates of depression and anxiety is an observation that is explicitly highlighted in this section and formulates a central question motivating the current thesis. This part of the chapter is drawn to a conclusion with an evaluation of explanations proposed for the prevalence rates of these mental disorders in the wider MENA region and the Gulf states.

Part two provides the theoretical framework of the thesis by exploring dominant psychological constructs that attempts to explain the relationship between mental disorders and religion, and identifies the potential advantages of an alternative paradigm, Cognitive Behavioural Paradigm (CBP). The primary tenets of CBP are then outlined with particular attention devoted to the schema construct and its relevance as a possible model for understanding the relationship between religion and mental health disorders.

In part three, a review of literature on both theoretical and applied ethno-CBT with majority Muslim populations experiencing mental disorders is conducted. In light of prior research, both the potential of the CBP approach in studying the complex relationship between religious beliefs and mental health in this demographic, as well as the significant limitations of published studies in the field, are examined. The chapter concludes with a summary of insights drawn from the literature on CBT with

Arab and Muslim populations. This summary subsequently serves as the foundation for articulating the rationale, aims, and objectives of the present thesis.

1.1 Introduction

1.1.1 Definitions

Research on the relationship between religion and mental health is well established and continues to grow (Lucchetti et al., 2021). However, there is considerable disagreement with regards to how key terms in the field are defined. It is not the purpose of this section to elaborate on this debate, nor to evaluate the merits of the arguments. Instead, the aim here is to provide acceptable working definitions and demarcation points for key constructs pertinent to the thesis. These concepts include religion and related terms such as religiosity, religiousness, and spirituality. Also, the term mental disorder is defined, along with similar expressions such as mental illness, psychological disorder, and mental health problems. Specifically, the constructs of depression and anxiety are defined. Finally, a summary of the main demographic characteristics of the population from which participants are drawn is presented for the benefit of the reader who is unfamiliar with the Arabian Gulf region.

1.1.1.1 Religion

Religion, as defined by Harold Koenig, a leading authority on religion and mental health, is a set of: “beliefs, practices, and rituals related to the 'transcendent’” (Koenig, 2018, p.13). The transcendent, according to him, refers to the mystical, supernatural, or God in Western religious traditions, and may also encompass beliefs about spirits, angels, or demons. Religion often includes specific beliefs about life after death and guidelines for personal behaviour and interactions with others (Koenig, 2018). Koenig's definition encompasses most major world religions, including Islam, and recognizes that religion can be organized and practiced within a community, or alone and in private.

However, religion is not unidimensional but includes a number of facets. Glock & Stark (1965) and Verbit (1970) for example, suggest five or six distinct dimensions, while more recent work classifies up to seventeen dimensions (e.g., Koenig, 2018). The four dimensional model proposed by Saroglou (Saroglou, 2011) is particularly relevant as it is based on a comprehensive study of previous theorizing and research, and takes into account the distinctiveness of each dimension and its interconnectedness, the psychological processes involved, and differences in content, salience, and expression across cultures.

The four dimensions of religion in Saroglou's (2011) model are believing, bonding, behaving, and belonging, and each is proposed to correspond to distinct psychological processes: cognitive, emotional, moral, and social, respectively. This thesis will focus specifically on the believing, or cognitive dimension of religion as it relates to mental health.

From a Muslim scholarly perspective Chapter 1 section 1.1.6 of this thesis addresses the challenge of defining the religion of Islam in particular, highlighting the diversity of philosophical and theological views in the Muslim community. In terms of a Muslim definition of religion in general the renowned Muslim anthropologist (Asad, 1993) argues that a universal definition of religion, whether Islamic or otherwise, is not feasible. Therefore, recourse is made here to the Quran's own definition of religion in order to gain a sense of how religion may be defined from within a Muslim scriptural perspective. Murata & Chittick (2000) note that according to Quran 3, Verse 19, religion can broadly be understood as simply submission to God. The Arabic '*Deen'*, meaning religion, is distinct from the word '*Millah'* which may be translated as tradition. The Quran recognises many '*millahs'* such as Judaism, Hinduism, Christianity etc. but only one *Deen* – that of submission (Quran 3:19). This concept of submission, or 'Islam' in Arabic, recurs throughout the Quran, suggesting a universal doctrine (Murata & Chittick, 2000).

For example, Quran 2:132 emphasizes that the essence of all religions is surrender to God: "And Abraham instructed his sons [to do the same] and [so did] Jacob, [saying], 'O my sons, indeed God has chosen for you this religion, so do not die except while you are in a state of submission (Muslims)'". This concept is echoed in many other verses too (e.g., 3:52; 5:111; 6:163; 10:72), framing religion as a universal attitude of surrender to God (Murata & Chittick, 2000). The differentiation among religions, such as Judaism, Christianity and Islam for example, according to this conception, lies in the specific laws (*Shari'a*) revealed to each tradition. These laws cater to the unique ethical and social needs of different milieus as well as being appropriate for the level of human consciousness at the time (Shahrour & Eickelman, 2023). However, all laws stem from a singular source of revelation (Shahrour & Eickelman, 2023).

Thus, religion, from this perspective, can be defined as an inner state of submission to God, coupled with an external practice of ethical conduct guided by the laws revealed for each age. This dual aspect of religion emphasizes both a personal spiritual commitment and a communal ethical framework, integral to understanding the essence of religious practice in the Abrahamic traditions from a certain Muslim perspective.

1.1.1.2 Spirituality (Including Faith and the Sacred)

In terms of Muslim conceptions of spirituality there appears to be a broad consensus among classical Muslim scholars regarding definitions of spirituality. Their views on spirituality often interweaves with concepts of faith, worship, and the pursuit of divine knowledge. For instance, the influential theologian and spiritual teacher al-Ghazali (1058-1111 AD) perceived spirituality as the purification of the soul through the eradication of blameworthy traits and cultivation of praiseworthy ones within the context of religious observance. This notion forms the central theme of his magnum opus "*Ihya' 'Ulum al-Din*" (The Revival of the Religious Sciences). In this work, he meticulously expounds upon the inner dimension of each religious ritual, advocating for synchronisation of the inner spiritual journey with outward religious adherence thereby uniting the body and soul.

This theme of integrating the exoteric and esoteric dimensions of Islam is also present in the works of some of the more explicitly mystical sages within the Islamic tradition. For example, Rumi (1207-1273) known for his focus on the transformative power of divine love is careful to emphasise the importance of shariah (law) as a guide on the path, stating: 'The Law [sharīa] is like a candle that shows the way: Without the candle in hand, there is no setting forth on the road.' (Ahmed, 2016, p. 21; based on R. A. Nicholson's translation of Rumi's Mathnawi). Similarly, Ibn Arabi (1165-1240 AD) in his extensive 560-chapter spiritual encyclopaedia "al-Futuhat al-Makkiyya" (The Meccan Revelations), grounds his spiritual realisations in Quranic verses and sound prophetic hadiths, concluding his mystical work with practical advice on living a virtuous life.

This conception of spirituality firmly anchored in virtuous religious practice is echoed by all bona fide Islamic spiritual paths '*Tariqa's*' (i.e., paths with a lineage that traces its history back to the prophet) and modern spiritually-inclined academics. Sayyed Hossein Nasr, a renowned Iranian professor of Islamic studies, defines Islamic spirituality as the *inner* dimension of Islam and inseparable from the religion itself (Nasr, 1991). Nasr's approach is characterized by a profound respect for the mystical traditions within Islam and the integration of intellectual inquiry with religious observance in spiritual pursuits.

In summary, classical and contemporary Islamic scholars and sages converge on the view that genuine spirituality in Islam is an amalgamation of inner purification and external religious practice. Placing emphasis on the experiential knowledge of God, grounded in scriptural and prophetic teachings.

In defining the terms spirituality, faith, and the sacred within a relevant Western academic framework, reference is made to a comprehensive literature review carried out by Harris et al. (2018). In their review, which covers the past thirty years of research, they extracted four initial definitions from the

literature and conducted three studies using definitional content analysis to determine the prototype phenomena utilized by researchers in defining these terms. They report that the concepts of religiousness, spirituality, faith, and the sacred are overlapping, multidimensional, and generally poorly defined. However, they conclude that religiousness, or religion, is a ritualized, institutionalized, or codified form of spirituality, which is culturally determined. Spirituality, in turn, "is the search for a relationship with the sacred" (Harris et al., 2018, p1) , where the "sacred is the manifestations of the divine" (Harris et al., 2018, p1). Faith is generally used synonymously with both spirituality and religiousness in the literature, according to Harris et al. (2018).

The definitions provided by Harris et al. (2018) for religiousness and spirituality are similar to those suggested by Koenig (2018) for religion. Therefore, for the purposes of clarity, in this academic thesis, when the term religion is used in isolation, it is meant in the Koenigian sense. When spirituality alone is discussed, it is intended in the way Harris et al. (2018) define it. However, the terms religiousness and religiosity will both be used interchangeably and will both refer to the extent of religious observance and/or practice. In line with Harris et al. (2018), faith will refer to both religion and spirituality, and the sacred will signify the manifestation of the divine in whatever form it takes.

1.1.1.3 Mental Disorder

When considering definitions of mental illness within a Muslim framework, an interesting, and perhaps surprising, picture emerges. Classical scholars, closely aligning with the Greek philosophies of their eras: especially those of Aristotle and Plotinus, contributed significantly to earlier conceptions of mental health. They also arguably pioneered some notions and practices that have only been accepted in the West during modern times. Prominent physicians and philosophers such as al-Razi (Razes, 854-925 AD), Ibn Sina (Avicenna, 980–1037 AD), al-Balkhi (850–934 AD), and Ibn Al-Haytham (Alhazen, 965–1040 AD) not only subscribed to the humoral theory of mental illness prevalent during their time but also made unique contributions to our understanding of mental illness that has more resonance to modern Western conceptions of the phenomenon. For example, Al-Razi has been accredited with being 'the father of psychology and psychotherapy' (Phipps, 2015, p. 111). Ibn Sina, in his 'Canon of Medicine' was the first to describe mental illness as a physiological brain imbalance and played a pivotal role in developing early humane psychiatric hospitals known as 'Bimarstans' (Miller, 2006). Al-Balkhi distinguished between endogenous and reactive depression, and was the first to attribute the aetiology of mental disorders to 'faulty thinking that leads to emotional psychological habits such as anxiety, anger and sadness…' (al-Balkhī, 2013, p. 15), thus predating current psychotherapeutic models such as cognitive behavioural therapy.

In contrast, contemporary Muslim scholars and researchers seem to emphasise a different conception of mental illness. For example, those that are affiliated with the Islamic psychology movement (e.g., Badri, Haque, Awaad, Rothman etc.) tend to emphasise spiritual predisposing factors to mental disorder. Drawing on al-Ghazali's (1058–1111 AD) formulation of the human psyche they argue that the dominance of the 'nafs al'ammara' (the inciteful soul) leads to mental illness (Rothman, 2021). This view frames mental disorders as a result of spiritual and moral misalignment, with healing therefore comprising spiritual and moral reform (Rothman, 2021).

Thus, while modern Muslim advocates of Islamic psychology seem to propose a fundamentally different definition of mental disorder focussed on spiritual health, classical scholars paradoxically paralleled their contemporaries, and both learned from them, and importantly, offered advances in conceptualising mental health that still echo today.

Current Western scientific literature on mental disorders and their conceptualization is both vast and complex. A significant body of research has highlighted the role of culture in shaping our understanding of mental disorders and corresponding responses to them (Gureje et al., 2020). While it is acknowledged that culture plays an important role in this process, the present literature review is based on studies that have generally used Western classification systems, such as the DSM-5 (American Psychiatric Association, 2013) and the International Classification of Diseases 10th and 11th editions (World Health Organization, 2004, 2019) or scales and operational definitions based on these systems. Therefore, for the purpose of this literature review, the DSM-5 definition of mental disorder will be adopted as a working definition.

The DSM-5 defines a mental disorder as "a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or development processes underlying mental functioning" (American Psychiatric Association, 2013, p. 20). It is also important to note the DSM-5 specifically excludes "culturally approved responses to common stressors" (American Psychiatric Association, 2013, p. 20), and "socially deviant behaviour" (American Psychiatric Association, 2013, p. 20) from mental disorder diagnoses.

Throughout this literature review, the term mental disorder will be used interchangeably with similar terms such as mental illness, psychological disorder, and psychopathology. While acknowledging the bio-medical, bio-psychosocial, and socio-political implications of each term, the definition outlined above will nevertheless be assumed when any of these similar terms are used.

It should also be noted that there is a lack of consistency in the way mental disorders are defined or characterized within the corpus of the literature. This is further reason for adopting the definition given above; because this definition is general enough to encompass most conceptualizations of the construct. When the specific terms *common* mental health disorders or *common* mental health problems are used instead, however, this is taken to refer specifically to those mental health difficulties that are relatively common and which essentially comprise non-psychotic depressive and anxiety disorders (National Institute for Health Care Excellence, 2011).

1.1.1.4 Depression

The literature on depression is also marked by variations in the definition of the condition and its sub-types. This poses a challenge when interpreting the findings of various studies, as it is not always clear which type of depression is being referred to. To address this issue, this literature review adopts a generic definition of depression, which includes those symptoms common to all non-psychotic depressive disorders described in the DSM-5. These symptoms are described as: "…the persistence of sadness, empty or irritable mood accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function" (American Psychiatric Association, 2013, p. 155). However, during the empirical data collection and reporting stages of this thesis, a more precise definition of depression will be used, namely: scores of > 10 on the Patient Health Questionnaire (PHQ-9) (Kroenke et al., 2001).

1.1.1.5 Anxiety

In terms of anxiety, the DSM-5 makes a distinction between fear and anxiety. According to the manual, fear is defined as "the emotional response to real or perceived imminent threat, whereas anxiety is anticipation of future threat" (American Psychiatric Association, 2013, p. 189). This distinction is further elaborated on by noting that fear is often associated with physiological arousal and escape behaviours, while anxiety is "associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviours" (American Psychiatric Association, 2013, p. 189). However, it is acknowledged that there is significant overlap between the two reactions and that the distinction ultimately lies in the type of object or situation that triggers the fear or anxiety and the associated cognitions (American Psychiatric Association, 2013).

In this thesis, the term anxiety (when used alone) will be understood in the sense that it is defined in the DSM-5, while the definitions for fear and anxiety will both apply when the phrase anxiety disorders is used. Specific anxiety disorders such as generalized anxiety disorder (GAD), panic disorder, specific phobias, and social anxiety disorder (SAD) will refer to the particular definitions given to them in the DSM-5, unless otherwise stated. Other anxiety disorders discussed in the literature that are not included in the DSM, such as death anxiety, will be understood in terms of the definitions given to

them by the particular study reviewed. In the cross-sectional study of this thesis (Chapter 5), anxiety is defined specifically as a caseness score (>8) on the Generalised Anxiety Disorder (GAD-7) measure (Spitzer et al., 2006).

1.1.2 Target Population

The present study takes place in the Arabian Gulf, which is a part of the wider Middle East and North African (MENA) region and comprises what is geo-politically referred to as Gulf Cooperation Council (GCC) Countries. The GCC is constituted of six countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. These states are characterized by a shared history, language, religion, tribal customs, and heritage.

The total population of the region in 2020 was approximately 57.6 million people with an estimated annual population growth of 1.1 million (GCC-STAT, 2021). Males constitute 61.2% of the population and 38.8% are female (GCC-STAT, 2021). Only two sexes are recognised in the region. The mean age in the GCC is 31.7 years old (GCC-STAT, 2021). It is a relatively affluent area with an estimated total GDP of $3.464 trillion (GCC-STAT, 2021). Cultural homogeneity is prevalent within the Gulf states, “the result of a long history of sustained social engagement and intermarriage” (Abdulla, 2016, p2). The region also shares a distinct "khaleeji" (gulf) identity, manifested in its food, dress, music, and customs, (Abdulla, 2016). All GCC countries share the religion of Islam, with different countries and groups within countries subscribing to various schools of Islamic jurisprudence (*madhabs*) and sects (i.e., Sunna, Shia, Ibaddi). Traditional customs, religiosity, and religious practices are strongly valued in these countries (Salam, 2019).

1.1.3 Religion and Mental Health

The relationship between religion/spirituality (R/S) and mental health has been the focus of extensive research with a lineage that can be traced back to William James (1842-1910), considered to be one of the founding fathers of modern psychology. Much of the now large body of research that has accumulated over the past 100 years has attempted to identify whether various aspects of R/S are associated with protective advantages with respect to indices of mental health; with numerous individual empirical studies (Malinakova et al., 2020) and systematic reviews pointing to a positive relationship between the two variables.

For example, in a large systematic review of 850 studies, Moreira-Almeida et al. (2006) concluded that the overall consensus of high quality research indicates that higher levels of religious involvement are associated with greater life satisfaction, happiness, positive affect, and higher morale. Specifically, the

positive effect of religiosity on mental health appears more pronounced in individuals facing challenging life circumstances such as old age, disability, or medical illness (Moreira-Almeida et al., 2006). In a more recent non-systematic descriptive review of research published between 2010 and 2018, Koenig (2018) found that the number of studies indicating a positive relationship between aspects of religion, such as the use of positive religious coping, seeking religious support, and adaptive religious appraisals and mental health greatly outnumber those that report a negative relationship between the two variables.

In the latest meta-analysis available at the time of this review, (Garssen et al., 2021) reported a modest yet positive influence of religiosity/spirituality (R/S) on mental health. The investigation reviewed 48 longitudinal studies that included 59 independent samples using a random effects model. Mental health was assessed using various parameters, including distress, life satisfaction, wellbeing, and quality of life. Religiosity was measured through different aspects of religious activities, such as church attendance, the importance of religion, intrinsic religiosity, positive religious coping, and meaningfulness. An overall significant effect size of r=.08 (95% CI: 0.06 to 0.10) was observed indicating a positive impact of R/S on mental health. This effect was specifically associated with participation in public religious activities and the personal importance attributed to religion.

Lucchetti et al. (2021) review of the current scientific evidence lends further support to the conclusion of the foregoing reviews but provides a more nuanced understanding of the relationship between R/S and mental health. Specifically, Lucchetti et al. (2021) assert that there is now “solid evidence” supporting the contention that higher levels of R/S are associated with lower depressive symptoms, lower suicidality, and a lower incidence of substance use. Additionally, they report that higher R/S is linked to better outcomes for individuals with bipolar disorder. However, research on the relationship between R/S and other mental disorders such as anxiety, psychosis, OCD, post-traumatic stress disorder, and eating disorders has shown more mixed results (Lucchetti et al., 2021).

In terms of how R/S may impact mental health indices, Lucchetti et al. (2021) concede that no single mechanism can fully explain the relationship in its entirety, although they suggest adherence to therapy, health behaviours, and use and abuse of drugs and alcohol may be potential mediating factors. They also discuss existing research which attempts to identify specific markers that may be implicated in the relationship between R/S and mental health. For example, higher levels of R/S were found to be associated with higher levels of brain-derived neurotrophic factor (Mosqueiro et al., 2019), while self-transcendence is linked to serotonin transporter availability in brainstem raphe nuclei (Kim

et al., 2015). Additionally, correlations have been observed between R/S and genes related to dopamine, serotonin, vesicular transporters, and oxytocin (Anderson et al., 2017).

With regard to psycho-religious processes, Koenig (2018) hypothesises several mechanisms through religion may be conferring mental health benefits. One such mechanism is the sense of optimism and positive view of the world intrinsic to most orthodox theologies of the Abrahamic faiths (i.e., Judaism, Christianity, and Islam). In principle, all three religions subscribe to a view of God as an all-loving, all-compassionate Being (Koenig, 2018). This belief reflects the idea that no matter how challenging life becomes in the short term, things will ultimately turn out well. Additionally, the belief in the hereafter holds that this world is merely of a transient nature, and that real eternal joy and everlasting peace will be realised in the life to come. This belief helps the individual by placing the struggles of this world into perspective and promotes enduring hope (Koenig et al., 2012). Furthermore, in Islam for instance, every affliction, no matter how big or small, is believed to be a means of purifying the soul rather than punishing the sufferer (See for example, the Hadeeth narrated by Abu Saeed and Abu Masood in which the prophet of Islam says: 'No fatigue, nor disease, nor sorrow, nor sadness, nor hurt, nor distress befalls a Muslim, even if it were the prick he receives from a thorn, but that Allah expiates some of his sins for that" (al-Bukhari, 1981)).

Religion also encourages people to engage in behaviours that can be helpful to both the individual and the community at large (Exline, 2002). For example, believers may be motivated to participate in charitable or voluntary work because they believe they will be rewarded for it. Such constructive behaviour can be beneficial to the individual both extrinsically, through the social reward gained as a result of the gratitude of others, and intrinsically through the sense of well-being felt following an altruistic act (Post, 2005). Religion also provides role models and examples of pious individuals who have effectively endured suffering and distress (Koenig, 2018) and, as a consequence, have emerged transformed beings following their acceptance of the Divine Will. Such instances are evident in religious scripture. For example, the story of Job in both the Bible and Quran is illustrative of a man who suffered severe chronic physical illness and substantial personal loss but was eventually restored to full health and regained his family and wealth (see Quran 21:83-84, and Bible, Book of Job). In addition, religion can offer a sense of belonging and social connection with others, serving as a valuable source of support and solace during difficult times (Koenig, 2018). It can also provide guidance to its adherents when facing significant life decisions, such as the raising of a child or caring for an aging parent.

Finally, “religious coping” (Pargament, 2001) is a psychological construct that also attempts to explain the positive relationship between R/S and mental health. Religious coping has a maladaptive aspect to it (discussed later) as well as a positive, more helpful dimension. Positive religious coping reflects “a secure relationship with a transcendent force, a sense of spiritual connectedness with others, and a benevolent world view” (Pargament et al., 2011, p. 51). This can lead to the adoption of religious coping strategies, such as reappraising stressful situations as benign, eliciting the help of God, treating God as a partner and seeking His love and care (Xu, 2016). All these mechanisms may ultimately result in religious individuals finding meaning in distress, having enhanced social networks, achieving a sense of mastery and control over given situations, and gaining comfort in closeness to God and likeminded religious individuals (Pargament et al., 2000).

1.1.4 Religiosity and Depression

The prevalence of depression continues to be a significant global health concern, with an estimated 280 million individuals affected in 2019, representing 3.8% of the world population (The Institute for Health Metrics and Evaluation, 2019). The relationship between R/S and depression has been widely studied and the field has benefited from the presence of several large scale meta-analytic reviews which collectively suggest a negative correlation between various measures of religiosity and depressive symptomology.

In an early meta-analyses, Smith et al. (2003) analysed 147 studies (N = 98,975) examining the relationship between religiousness and depression. Across all studies, they found an average inverse correlation between R/S and depression of -0.10, indicating that higher levels of religiosity are mildly associated with fewer depression symptoms. Importantly, the results were not found to be moderated by ethnicity or age. However, the type or measure of religiousness used in the analysis was found to influence the results. Extrinsic religious orientation (L. Miller & Kelley, 2005) (i.e. using religion to serve external goals such as gaining social status or reinforcing one’s ego) and religious struggle (described in more detail below) were linked to higher levels of depression (Masters, 2013).

In a subsequent systematic review of the literature published prior to 2010, Koenig et al. (2012) report that 61% (271 of 443) of the studies reviewed showed an inverse relationship between R/S and measures of depression. Even when narrowed down to those studies adopting more rigorous methodologies (178 studies), this trend continued, with 68% (119/178) reporting a negative association between R/S and depression, and only 7% (13/178) finding a positive relationship (Koenig et al., 2012).

While meta-analytic reviews discussed so far are highly informative, they have primarily relied on studies using cross-sectional designs which are limited in addressing issues of causality. However, studies using alternative designs such as longitudinal methodologies also seem to support a relationship between religion and depression. For example, one 14-year follow-up study in Canada comprising a sample of 12,583 participants (Balbuena et al., 2013) found that monthly religious attenders had a 22% lower risk of depression (hazard ratio 0.78, 95% CI 0.63 to 0.95) compared to non-attenders. This effect remained even after controlling for age, income, family and personal history of depression, marital status, education, and levels of perceived social support. Additional, in a systematic review that included only longitudinal studies, Braam & Koenig (2019), reviewed 152 studies published up to 2017. They found that 49% of the studies included (138) reported a significant association between R/S and a better course of depression, 41% of the studies demonstrated non-significant associations, and 10% showed more depression or reported mixed results.

The overall trends reported above is supported by the most recent comprehensive examination of the literature on the relationship between religiosity and depression. Koenig et al. (2024) review focussed primarily on large cohort studies, RCTs, and meta-analyses of RCTs from the past 50 years. They concluded that the majority of the prospective cohort studies indicated that meaningful religious involvement predicts lower future symptoms of depression or a reduction in depressive symptoms over time compared to baseline levels. Furthermore, they determined that most of the RCT's and meta-analyses of RCT's support the claim that religious interventions are effective in reducing symptoms of depression.

1.1.5 Religiosity and Anxiety

In terms of anxiety disorders, global estimates for the number of people experiencing these conditions in 2019 were around 301 million people, approx. 4% of the global population (The Institute for Health Metrics and Evaluation, 2019). While there is some evidence to suggest that R/S may provide a protective buffer against anxiety, the literature on this relationship seems less conclusive than that between R/S and depression. This may partly be explained by the relative lack of previous research in the area. Indeed, some authors have claimed that examining the relationship between religion and anxiety has been largely neglected (Shreve-Neiger & Edelstein, 2004). For example, one early review was only able to identify 17 previous studies that explicitly examined the relationship and concluded that there was no evidence of a link (Shreve-Neiger & Edelstein, 2004). However, a subsequent review identified a total of 299 studies that met criteria for inclusion (Koenig, 2012), which can be interpreted as a greater focus on the relationship in the intervening ten-year period. This particular review included both qualitative and quantitative studies and concluded that 49% (147) of the studies

reported lower levels of anxiety among religious individuals, while only 11% (33) of the studies indicated higher levels of anxiety among religious people.

Longitudinal studies in the area are also characterised by inconsistent results. For example, a longitudinal study conducted by Rasic et al. (2011) of 1091 US adults found that religious worship attendance and seeking spiritual comfort were not associated with anxiety disorders. Similarly, a study of 451 Taiwanese adults found that religiosity did not correlate with indices of anxiety after controlling for demographic characteristics, physical health, and social support (Shiah et al., 2015).

Upon initial examination, the scientific literature on the relationship between R/S and anxiety does appear mixed, with some studies indicating a protective effect for religion on anxiety while others finding no significant relationship, or indeed a negative effect (Rosmarin & Leidl, 2020). The inconsistencies that characterise the research to date may, in part, be attributed to a number of key methodological weaknesses. These include a lack of standardized measures, poor sampling procedures, limited assessment of religion as a variable, or focus on certain religious groups - namely Christians.

However, following a more comprehensive examination of the literature Rosmarin & Leidl (2020) argue that the discrepancies are better explained by adopting a different heuristic. They recommend distinguishing between 'behavioural aspects' of R/S, such as attendance to religious service, frequency of prayer etc.; and 'internal aspects,' including beliefs, attitudes and motivations. Concerning the former they note that research has produced inconsistent results with generally small effect sizes across relevant studies. In contrast, research on the relationship between internal facets of religiosity and anxiety has yielded much stronger and more consistent correlations with anxiety. Rosmarin & Leidl (2020) highlight that positive beliefs, such as faith and trust in God, secure attachments to God, intrinsic religious motivation and the like, are strongly correlated with lower anxiety, showing medium to large effect sizes. Conversely, negative R/S beliefs and attitudes, such as perception of a punishing God, mistrust towards God and insecure religious attachment are all associated with higher anxiety levels. Lucchetti et al., (2021) further argue that despite the apparent inconsistencies, the general trend in religion-anxiety research is promising.

1.1.6 Islam and Muslims

Prior to providing context to the target population of this thesis it is important for theoretical and ethical reasons to first draw a clear distinction between Islam, the religion, and Muslims, the followers of that religion. Islam is considered to have been founded in 610 CE by the prophet Mohammad

through what Muslims believe were revelations by God delivered by the archangel Gabriel. Islam, in its essence, professes a simple message: God is one. He is the absolute good, infinite in generosity and complete in perfection (Ibn'Arabi, 2008). All the prophets and sages throughout human history have come to convey the same message: namely, that by pursuing a virtuous life, human beings can actualise the noble qualities that will draw them closer to the infinitely good, which is God, and thus achieve ultimate felicity (paradise). All worldly wrongs will be righted on the day of judgement when divine justice will prevail.

Muslims, on the other hand, are comprised of individuals and communities that have interpreted these essential teachings in a myriad of ways and applied them in different forms. The rich spiritual, theological, philosophical, and legal traditions that have ensued became hugely diverse and led to complex religious intellectual debates, resulting today in a wide range of opinions regarding even the smallest points of doctrine or legal ruling (see Winter, 2013 for a full discussion on the different schools of Islamic theology).

Therefore, to assume a uniform Muslim perspective on anything is inaccurate. For example, an Ash'ari (refence to the disciple Abu Musa alAsh'ari (died c. 935 or 936) and a school of creedal doctrine considered to be one of the major doctrinal orthodoxies held by Sunni Muslims (Allard, M, 2014)) would understand the verses of the Quran and *Hadeeth* (prophetic tradition) that ascribe spatial and physical attributes to God (e.g., God settling on the divine throne or God having a hand) as being merely allegorical allusions to divine power, whereas a Salafi (a relatively recently formalised school culminating in the 18th century movement of Mohammad ibn Abdul Wahab in the Hijaz) would comprehend these attributes literally, but submit that the how it is so is unknown. A Mu'tazilite (8th century philosophically inclined theologians who use the categories and methods of Hellenistic philosophy to derive their distinctive creedal position (Britannica, T. Editors of Encyclopaedia, 2020)), who appeals to reason as the ultimate authority for determining the true meaning of scripture, reaches different conclusions with regards to the nature of the Divine Being than a Sufi (Islamic spiritual Masters) who contends that real knowledge of God is achieved primarily through ego dissolution (i.e., the denial of self-centred whims and desires) and a direct *dhowq* (tasting) of spiritual realities. Whether the world was created *ex nihilo* or simply brought into manifest existence (*wujud dhahir*) from a primordial state ('*ain thabita*) residing in the eternal knowledge of God, as an Akbarian (reference to a follower of *al-shaykh al-Akbar* 'greatest teacher' (doctor maximus in Latin) Muhyiddin Ibn Arabi d. 1240) would argue, is another fundamental point of disagreement. See Fakhry (2009), for a fuller discussion on the numerous philosophical and theological trends in the Muslim world.

It is therefore essential to acknowledge the wide range of interpretations and applications of Islamic teachings that exist. It is equally important to recognize that the beliefs being examined in this thesis are simply *cognitive representations* internalized by the Muslims being studied. These beliefs represent a particular understanding of religious texts and teachings that have been developed within a specific historical moment and culture by a distinct community of Muslims. As such, they cannot be considered to be representative of Islam in its entirety.

1.1.7 Religiosity in MENA

One of the key questions this thesis aims to address is: Why does the MENA region experience relatively high prevalence rates of mental disorders (including depression and anxiety) despite the fact that it tends to be religious, and in spite of the research highlighted above suggesting a protective role for religion against depression and to some extent anxiety? The following sections will attempt to provide supporting evidence for the first two suppositions posited in this question, namely: (a) Muslims in the MENA region are generally religious, and (b) Populations in the MENA region experience significantly higher rates of mental disorders compared to other regions.

The Pew Research Centre, a leading research centre in the field, has estimated that 93% of the MENA population are Muslim with the vast majority of those surveyed (part of a Muslim world wide survey involving over 38,000 interviews across 39 Muslim countries) reporting religion to be very important to them (Pew Research Center, 2016). In Morocco, for example, 89% of those asked endorsed the option that religion is very important in my life, 85% in Jordan, 85% in the Palestinian Territories, 82% in Iraq, 78% in Tunisia, and 75% in Egypt. Even in Lebanon, where participants scored lowest, more than half of those surveyed (59%) indicated that religion was very important to them.

These data are further reinforced by other statistics indicating that participants wish to have religion manifested in the social and public domains as well, through the implementation of Islamic law. Using the same methodology and samples, respondents were asked to specify the extent to which they supported making Sharia the law of the land. In the MENA countries surveyed (Morocco, Jordan, the Palestinian Territories, Iraq, Tunisia, Egypt, and Lebanon), the median percentage for those favouring the establishment of Islamic law in public life is 84% (Pew Research Center, 2013).

1.1.8 Mental Health in MENA

Before presenting evidence in support of the second assertion that Muslims in MENA experience relatively high levels of mental health disorders, it is important to first draw attention to issues which could be influencing the accuracy of the available, especially local, research. This is to ensure that any

data subsequently presented are interpreted in a manner that is both meaningful and realistic. Some of the difficulties listed below pertain to collecting prevalence data in general, while others may be more specific to the MENA region. The issues include:

- Mental health research in many MENA countries is still in its infancy (Alzahrani, 2020) with some published material affected by poor methodological quality (Maalouf et al., 2019). Consequently, it is difficult to rely on some of the available data, making any conclusions tentative.
- Mental illness is often stigmatized in the MENA region (Sewilam et al., 2015; Zolezzi et al., 2018), which may lead to underreporting of mental health difficulties.
- There are cultural differences in the perception and expression of mental illness, which may lead to misdiagnosis (Gopalkrishnan, 2018).
- There is a lack of access to mental health services in many parts of the MENA region (Khatib et al., 2023) which again could result in underreporting and underestimating prevalence rates.
- Parts of the MENA region have witnessed significant population displacement due to war and conflict, which may make it difficult to accurately assess the prevalence of mental disorders that includes displaced populations (Morina et al., 2018).
- The ongoing conflicts in some parts of the region may also make it difficult to accurately assess current prevalence rates in some parts of the region due to access and security concerns (Hoogeveen & Pape, 2020).
- Other methodological problems such as: (a) the use of point prevalence as a means for establishing rates of mental disorders, (b) non-probability sampling procedures implemented, (c) variation amongst measures etc. are all likely to affect the accuracy of available data (de Jong & Young-DeMarco, 2017).

With these caveats in mind, the aggregate of available research, when considered collectively, does nevertheless suggest a trend of high prevalence rates of mental disorders in the MENA region. This trend is further supported by data from the Global Burden of Disease (GBD) 2010 study[1] (Global Burden of Disease Collaborative Network, 2010). For instance, a systematic review conducted by Whiteford et al. (2015) and incorporating data from GBD 2010 study indicates that the prevalence of various mental disorders are higher in the MENA region than in any other region worldwide.

[1] The Global Burden of Disease Study (GBD) began three decades ago and offers accurate and up-to-date assessments of health outcomes. Currently, the GBD is the result of a collaboration between over 8,000 researchers and analysts from more than 150 nations (Murray, 2022) and is managed by the University of Washington's Institute for Health Metrics and Evaluation (IHME).

More recent evidence for high prevalence rates comes from Ibrahim (2021), who, following a search of all electronic databases and publications on mental health in MENA from 1990 to 2018, reported prevalence rates of mental disorders in the region of between 15.6% to 35.5%. Of particular interest is the observation that even their lowest estimate of 15.6% is higher the global average of 13.04% (Institute for Health Metrics and Evaluation (IHME), 2020).

These trends are further supported by current Global Burden of Disease (GBD) data (Institute for Health Metrics and Evaluation (IHME), 2020) which estimate higher rates of mental disorder in the MENA region than any of the other seven super-regions included in the analysis (Global Burden of Disease Collaborative Network, 2020). Furthermore, according to the GBD data sources every country in MENA for which information is available reports higher prevalence rates than the global average (Global Burden of Disease Collaborative Network, 2020). The broad consensus of international data therefore seems to suggest the presence of relatively high rates of mental health disorders in the MENA region.

1.1.9 Depression and Anxiety in MENA Pre-COVID-19

The prevalence rates for the specific disorders under investigation in this thesis, namely depression and anxiety (pre-COVID-19 pandemic), also appear to be relatively high in this region. Zuberi et al. (2021) conducted a systematic review and meta-analysis that included previous systematic reviews published prior to 2014 and primary cross-sectional and longitudinal studies (published between 2014-2020), reporting prevalence estimates for mental health disorders within the Eastern Mediterranean region (EMR)[2]. They estimate the following overall rates for the 15 countries included: depression (14.8%); generalized anxiety disorder (10.4%); obsessive compulsive disorder (2.8%); phobic disorders (1.8%); and panic disorders (1.1%).

Comparatively high prevalence rates for both depression and anxiety are also estimated for the MENA region by the Global Burden of Disease Collaborative Network (Global Burden of Disease Collaborative Network, 2020). According to this data source, the MENA region recorded the highest rates of depressive disorders among all the seven super-regions included in the GBD study, and third highest rates for anxiety disorders. Moreover, every country in the MENA region for which data is available, is

[2] Eastern Mediterranean Region (EMR) of the World Health Organization includes all MENA countries apart from Alegria but adds the horn of Africa and Afghanistan – i.e. Arab League countries plus Afghanistan. In this particular study the following countries were included: Afghanistan, the Arab Republic of Egypt (Egypt), Bahrain, Djibouti, Iraq, the Islamic Republic of Iran (Iran), Jordan, the Kingdom of Saudi Arabia (Saudi Arabia), Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, the Republic of Yemen (Yemen), Somalia, Sudan, the Syrian Arab Republic (Syria), Tunisia, and the United Arab Emirates (UAE)

estimated to have higher prevalence rates for both depression and anxiety than the global average (Global Burden of Disease Collaborative Network, 2020).

When focusing specifically on the GCC countries within the MENA region, the international GBD study shows that the percentage of total prevalent cases of depressive and anxiety disorders in every GCC country is also higher than the global average. In regards to local research., it is important to reiterate that research (especially local research) in these counties has been of mixed quality (Saab et al., 2022), limited in quantity, and often targeting specific populations. However, notwithstanding these limitation, indigenous published studies in peer reviewed journals also confirm a high prevalence of depression and anxiety among the groups studied. For example, a systematic review of the literature published between 2007 and 2017 on prevalence rates in the UAE by Razzak et al., (2019) found the prevalence of depression to be between 12.5% and 28.6%, with women scoring twice as high as men (Razzak et al., 2019).

In Saudi Arabia, a study by Al-Faris et al. (2012) involving 1186 university health professions students showed a much higher prevalence rate of 47.0% for depression. In another study by Al-Qadhi et al. (2014), 477 patients in three large primary care settings also in Saudi Arabia were surveyed, with half of the sample exhibiting symptoms of depression as measured by the PHQ-9. Becker (2004) also conducted a study in Saudi Arabia using PHQ-9 (n = 431) that showed 20% of the sample drawn from a primary care setting reported depression. Finally, a recent study by Alwafi et al. (2022) investigating prevalence and predictors of nomophobia among the general population in Saudi Arabia (and Jordan) found the rate of anxiety (of any type) among the 5,191 overall sample (85% of whom were from Saudi Arabia) to be 26.5%.

A Kuwaiti group carried out a prospective study over 5 months (n=1,046) of primary care centres in all five Kuwaiti governorates, and found the point prevalence for depression to be 22.9% and 17.7% for anxiety (Alkhadhari et al., 2016). Al-Otaibi et al., (2007) conducted a cross-sectional study (n=2,320) from primary health care facilities covering all of Kuwait using the Beck Depression Inventory (BDI), reported high rates of depression among both males (46%) and females (37.1%).

In Bahrain, Al Dallal & Grant (2012) conducted a cross-sectional study of mothers (n=237) from all five governates of Bahrain (again in primary health care canters), and reported a prevalence rate of 37.1% postnatal depression among this group. When studying factors associated with depression and anxiety among Bahraini Medical students, Mahroon et al. (2018) discovered that 40% of the 350 students who completed the BDI-II had depressive symptoms, and 51% were experiencing anxiety according to the Beck Anxiety Inventory (BAI).

In Qatar, a prospective cross-sectional study by Bener et al. (2012) in primary health care centres and clinics across the country (n = 1,660), reported a prevalence rate for depression of 26.6% among males, and 30.1% among females. Also in Qatar, a study using the World Health Organization Composite International Diagnostic Interview (WHO-CIDI) and based on adult attendees of one primary health care centre reported that 18.31% of the 1,475 participants met the criteria of major depressive disorders and 17.3% experienced an anxiety disorder of some type (Bener et al., 2015).

In Oman the limited data available show similar trends. For example, Al Sabahi et al. (2014) conducted a retrospective review of the records of the comprehensive health assessment of the population aged greater than 60 years in Al-Dakhiliyah governorate. The total sample was 1,519, and the rates of depression were again higher in women than men, with a total rate for this older cohort estimated at 16.9%. Al-Ghafri et al. (2014) carried out a study involving 132 medical students, indicating a rate of depression as measured by the PHQ9 to be 11.4%.

The foregoing review highlights that both international and available indigenous studies indicate that depression and anxiety are significant concerns in the MENA region, including GCC countries. While figures vary across studies, it is clear that rates of these mental health conditions are relatively high. Indigenous studies conducted across the GCC (pre-COVID 19) with diverse populations have reported depression rates ranging from 11% to 50% and anxiety rates ranging from 16% to 51%. In contrast, estimates from international studies, such as the Global Burden of Disease study, suggest lower prevalence rates of depression and anxiety in the GCC countries, ranging from 4.4% to 4.9%. However, even these more conservative GBD figures are higher than the global average. The disparity in prevalence rates between local and international studies may be due to a variety of factors including differences in study design, method, and cultural factors that can influence mental health reporting and data collection methods.

1.1.10 Depression and Anxiety in MENA During-COVID-19 (focus GCC)

Prevalence data for depression and anxiety collected during the COVID-19 pandemic also show high rates, if not evidence of an increase. For example, in a survey of a community-based sample (n = 1,039) recruited via UAE social media and email networks, Thomas et al. (2020) report that 58.4% of participants scored above the caseness cut off point for depression (using the PHQ-8), and 55.7% scored above the cut off point for anxiety (measured by the GAD-7). In a Saudi Arabian study, again using social media platforms, consisting of 1,597 participants, 28.9% of the respondents reported depressive symptoms and 16% reported symptoms of anxiety (Alamri et al., 2020). Considerably higher

rates were reported by a prevalence study carried out in Kuwait using similar social media data collection methods. In this study, Alsharji (2020) report that 59.6% of the sample experienced depression and 53.7% experienced symptoms of anxiety.

A wide-ranging systematic review of data published between January 2020 and January 2021 on the prevalence and burden of depression and anxiety in 204 countries due to the COVID-19 pandemic, carried out by Santomauro et al. (2021), provides further systematic estimates on the mental health impact of COVID on various regions around the world. Assembled data was used in a meta-regression to estimate change in prevalence of MDD and anxiety disorders between pre-pandemic and mid-pandemic periods. Santomauro et al. (2021) used final prevalence evaluations to estimate the Disability Adjusted Life Years (DALY's) for MDD and Anxiety disorder. The lack of high quality data in the MENA (identified above), led Santomauro et al. (2021) to advise caution against over-extrapolating from their data. Despite this however, they do estimate an increase in prevalence of MDD and anxiety within MENA from an already high baseline to one where MENA expresses the highest rates of depression in the world, and second highest rates for anxiety.

In conclusion, both local prevalence studies conducted during the coronavirus pandemic and estimates based on GBD data indicate an increase of depression and anxiety rates in the MENA region. The Santomauro et al. (2021) systematic review, for example, reports an increase of 37% in depression and 32% in anxiety rates during the pandemic.

1.1.11 Explanations for Depression and Anxiety Prevalence Rates in MENA

The preceding discussion of prevalence of depression and anxiety in the MENA region alluded to a relative lack of quality locally based research in this area (Saab et al., 2022), which often consists of grey literature (Aly et al., 2020; Saab et al., 2022). Much of the research that is available is limited to identifying prevalence rates within certain groups and comparatively less research has focused on questions of aetiology. These two factors render it difficult to offer definitive explanations for the high rates of mental health problems, such as depression and anxiety in these countries. However, some tentative causal explanations have been proposed. One such explanation is that higher rates are a result of the war and conflict, socio-political instability, and the economic challenges that the region has endured. For example, nearly 85% of MENA countries have experienced a humanitarian crisis of some form over the past twenty years (Mandil et al., 2013).

Indeed**,** Charara et al., (2017) speculate that various geopolitical factors (including war, conflict, and revolutions), and socio-economic instability in the MENA region are likely to increase the prevalence

and burden of mental disorders. This speculation is partially supported by the Zuberi et al. (2021) study, which found higher rates of phobic disorders and post-traumatic stress disorder in populations exposed to humanitarian crises. Whiteford et al. (2015) also highlighted the effect of conflict on their estimates of specific disorders, with depression and anxiety disorders being more prevalent in countries with a history of war or conflict, many of which are in the MENA region.

However, in respect of GCC countries (specifically, UAE, Qatar, Bahrain, Saudi Arabia), given their greater political stability and relative affluence, alternative explanations for the apparently high prevalence of common mental health problem have been attempted. One suggestion is that there are negative mental health impacts stemming from rapid urbanisation (Srivastava, 2009; Szabo, 2018) and that this phenomenon applies in particular to the Gulf states (Al-Darmaki et al., 2016; Thomas, 2013). However, while rapid urbanisation may explain some of the effect, it is unlikely to account for it fully, as based on U.N. data, only two GCC countries experienced the most rapid urbanisation globally between 2015-2020, Oman (ranked 3rd) and Bahrain (ranked 11th). The remaining GCC countries, including the UAE, were further down the rankings (United Nations, Department of Economic and Social Affairs, Population Division, 2019). Moreover, the top ten countries undergoing the fastest rate of urbanisation are in Africa, which are reported to have significantly lower depression and anxiety rates than GCC countries (Global Burden of Disease Collaborative Network, 2020).

Another proposal is the effect of globalisation on the mental health of traditional societies like those of the GCC (Thomas, 2013). While this explanation is certainly plausible, and again may describe some of the effect, it is unlikely to account for the entirety of the phenomenon. According to the Swiss Economic Institute KOF index, GCC countries are not among the most globalised countries in the world, with only the UAE (ranked 40) being in the top quartile of countries recording the highest index of globalisation since 1970 (Gygli et al., 2019). Additionally, many countries, including a majority Muslim country (Malaysia), have higher rankings of globalisation than the UAE, but report lower rates of depression and anxiety than countries in the Gulf region (Gygli et al., 2019).

Given the above, there is reason to suspect that additional factors are contributing to the phenomenon of high rates of depression and anxiety in the GCC region as well. Considering the central role of religion in GCC societies (Thomas, 2013), it is important to consider whether misinterpretation or misapplication of the otherwise benign teachings of religion is one of these contributing factors. Thus, an analysis of the potential role of psycho-religious factors in exacerbating mental health issues in the region is warranted.

1.1.12 Conclusion

This section of the introduction has endeavoured to substantiate the two main propositions that form the basis of key questions motivating this thesis. Firstly, it has demonstrated that the MENA region is generally characterized by high levels of religiosity; and secondly, that this region also experiences significantly high levels of depression and anxiety when compared to global rates. While possible reasons for these high prevalence rates have been identified and discussed, these explanations have their limitations.

Therefore, it is suggested that exploring the potential role of maladaptive religious beliefs on mental health could shed further light on the issue of higher prevalence rates of depression and anxiety, especially given the observation that this is a region where religion is integral to most people's lives. To this end, the next section will undertake an exploration of constructs and paradigms that have attempted to understand the relationship between religion and mental disorder. The discussion will allow for a deeper understanding of this relationship and provide an evaluation of which theoretical framework may offer the most valuable paradigm for exploring the phenomenon at hand.

1.2 Theoretical Framework

The previous section has provided evidence for two primary contentions: First, that prevalence rates of depression and anxiety are high in MENA countries and in Gulf countries compared to other regions and global averages. Second, the MENA region is characterised by strong religious adherence. Together these two observations raise the question as to why does such a religiously observant region experience relatively high levels of depression and anxiety when research seems to suggest a mitigating effect for religion on mental health problems? Resolving this paradox calls for an explanation that goes beyond the geo-political conflicts, rapid urbanisations, or industrialisation factors that have been previously studied but found to be insufficient. Alterative, or more accurately, complimentary, psychological explanatory frameworks will therefore be introduced in this section to illuminate this phenomenon further and offer a justification for the paradigm subsequently adopted.

1.2.1 Religious Struggle Construct

In attempting to identify the nature of the relationship between religiosity and mental distress, the concept of religious or spiritual (R/S) struggle has been the focus of considerable attention. R/S struggles are defined as "tensions, strains, and conflicts in relation to what people hold sacred" (Pargament & Exline, 2021, p. 395) and also as "efforts to conserve or transform a spirituality that has been threatened or harmed" (Pargament & Exline, 2021, p. 395). In other words, religious struggle

refers to the internal conflict and distress that individuals may experience when their beliefs and values are challenged or inconsistent with their experiences or current life circumstances.

Religious struggle may emerge from persistent striving for spiritual perfection and lead to feelings of guilt and shame when one's actual behaviour is perceived as falling short (Pargament & Exline, 2020). It may also emerge in times of personal crisis, when an individual may question the compassionate nature of God for allowing pain and suffering to occur (Pargament & Exline, 2020). These thoughts can create cognitive dissonance between belief in God's divine love and the existence of such negative experiences, leading to inner conflict and cognitive attempts to reconcile these seemingly contradictory realities. Such struggles may have even more significant consequences for the believer, such as questioning the existence of God (Pargament & Exline, 2020), and thus shaking the very foundations of their belief system. Moreover, individuals experiencing difficult circumstances may blame themselves for the misfortune that has befallen them, perceiving their predicament as a punishment from God.

To date, experts in the field have identified three major categories of religious struggle (Exline, 2013; Pargament & Exline, 2021): 1) struggles relating to supernatural entities such as deities or evil forces; 2) internal struggles relating to beliefs, morals, and ultimate meaning, and 3) struggles with others regarding R/S matters (Pargament & Exline, 2020). These categories are a summary of six subtypes of religious struggle proposed by Exline et al. (2014). The subtypes include: *divine* (negative emotions related to beliefs about God), *demonic* (apprehension that evil spirits are responsible for negative events), *interpersonal* (negative experiences involving religious people or institutions), moral (wrestling with moral principles and worry or guilt about perceived offenses by the self), *doubt* (troubled by doubts about one's R/S beliefs), and *ultimate meaning* (concern about not having deep meaning in one's life). The divine dimension, in particular, has been found to predict variance on several mental health measures, including depression and anxiety.

Pargament & Lomax (2013) have proposed a causal relationship between R/S struggle and psychological distress, and suggest that religious struggle can be a cause of psychological distress (primary struggle), a result of interpreting distress (secondary struggle), or both (complex struggle). However, Pargament & Exline (2020) note that much of the research in this field has been correlational in nature, and therefore a definitive causal relationship between R/S struggles and mental distress cannot be established. Nonetheless, research has consistently shown a strong association between religious struggle and psychological distress across various samples. For instance, in a national sample of mainly white (majority married) individuals, McConnell et al (2006) found that negative religious coping (negative religious coping is used interchangeably here with religious struggle (Pargament et

al., 2011) was significantly linked to a number of psychopathologies including depression and anxiety. Another study of Iraq and/or Afghanistan war veterans by Currier et al. (2017) reported a positive correlation between R/S struggle and suicidality. Additionally, a meta-analysis of longitudinal studies by Bockrath et al. (2022) and another involving a nationally representative sample of 2,076 US adults by Pomerleau et al. (2020) report that religious struggle appears to play a mediating role in the relationship between stressful life events and psychological adjustment.

However, a key criticism of the R/S struggle construct has been its predominant use of Christian populations in studies and in the development of the scales that subsequently emerged, such the Religious Struggle Scale (RSS) (Exline et al., 2014). This shortcoming has called into question the applicability of the R/S struggles constructs and scales for Muslim populations (Abu-Raiya et al., 2018). For instance, some items in the RSS that ask if a respondent felt 'angry with God', or 'Felt troubled by doubts or questions about religion or spirituality' (Exline et al., 2014) could be considered inappropriate questions to ask a practicing Muslim. Indeed Abu-Raiya et al. (2018) recommends caution in this regard as discussing R/S struggle with an observant Muslim sample is a sensitive issue due to the high esteem and respect with which Muslims hold their religion. Therefore, any expression of negative feelings or doubt towards the divine is considered morally wrong and can create dissonance and disharmony both within the individual and between them and their wider community (Abu-Raiya et al., 2018).

To address this issue, Abu Raiya et al. (2008) developed the 60-item Psychological Measure of Islamic Religiousness (PMIR) scale for use with Muslim populations. The PMIR has seven subscales and was validated through an international, internet-solicited sample of 340 Muslims, and has favourable psychometric properties. The Islamic Religious Struggle (IRS) subscale was used by Abu-Raiya et al. (2018) to examine the relationship between religious struggle and well-being in a sample of 706 Muslims from Israel/Palestine, Turkey, and Malaysia. The findings of this study indicate that overall the Muslim sample experienced low levels of religious struggle, with the Turkish sample reporting higher levels when compared to Palestinians and Malaysians. Moreover, the study found that nationality may play a role in mediating the relationship between religious struggle and mental health, as higher levels of anxiety were predicted by higher scores of religious struggles in Malaysians only, while lower scores on satisfaction with life were predicted by higher scores on religious struggle among Palestinians and Turks.

This particular study is important because it is one of the first of its kind to provide insights into the relationship between R/S struggle and mental wellbeing among Muslims. However, the findings of the study are limited for two reasons. First, the investigation only included samples from three Muslim

nations, making it difficult to generalize the results to Muslims across the world. Secondly, the study populations may not be representative of more conservative Arab-Muslim societies such as those in the Arabian Gulf. Specifically, the study was conducted in Turkey, a secular state; with Palestinians, a minority population in a predominantly Jewish state, and Malaysia, a religiously diverse country. These samples therefore may not be representative of Muslims living in more culturally homogeneous and conservative societies.

Notwithstanding these imitations, Abu-Raiya et al. (2018) have nevertheless offered useful insights into R/S struggle among Muslims. In their study, Muslim participants were observed to report low overall levels of R/S struggle, with Turkish participants reporting more R/S struggle than those from Palestine and Malaysia. The authors suggest that this may be due to reduced levels of theological desirability (i.e. wanting to present religion in a favourable light) or greater willingness to report religious struggle in a secular society. However, while this may be one explanation, another plausible, and arguably a more parsimonious interpretation of this finding, is that individuals from more conservative societies simply do not experience the full range of R/S struggle experienced elsewhere. This may be because while religious Muslim individuals may blame themselves for their misfortune (perceiving it as a punishment for being bad Muslims, for example) they perhaps do not experience doubt about God's existence or attribute any malign intentions to Him. In other words, the struggle experienced is related to the self or others, and not divinely attributed, which perhaps lessens the intensity and depth of the negative experience. While this remains a hypothesis, some research does seem to support this contention with reports that Muslims generally experience lower levels of R/S struggle than Christians (Abu-Raiya & Pargament, 2015).

1.2.2 Negative Religious Coping

It is worth noting that the empirical study of religious struggle has also drawn on the concept of religious coping. As a concept, religious coping reflects the idea that cognitive and behavioural tactics derived from their religious beliefs are utilized by individuals in an attempt to manage events that are appraised as distressing (Mozid, 2022; Stanisławski, 2019).

Religious coping involves a distinction between what is termed positive religious coping (i.e., evaluating the situation as an opportunity for spiritual growth) and negative religious coping such as interpreting the stressor as God's punishment. According Grey et al. (2023), and other leading researchers in the field (e.g., Pargament, 2001; Pargament et al., 1998), the use of positive religious coping reflects a diverse range of adaptive responses: such as belief in the meaningfulness of life, secure relationships with a loving God, behaviours such as prayer, and cognitive strategies like focusing

on the rewards of the hereafter, or appraising the situations as part of a bigger, benevolent divine plan. In contrast, negative religious coping is considered more reflective of R/S struggle in the wake of significant stressors.

The assessment of both positive and negative coping in individuals has typically involved the use of specific instruments such as the Religious Coping Questionnaire (RCOPE; Pargament et al., 2000). However, It has been argued that the item content of RCOPE assesses religiously based appraisals (Grey et al., 2023). For example, an examination of the negative religious coping subscale items on the Brief version of RCOPE (Pargament et al., 2011) confirms the observations of Grey et al. (2023), as the item content primarily describe a range of thoughts and beliefs about possible religious reasons perceived to be causative of the distressing events. Hence, Grey et al. (2023) argue that these scales are primarily measuring individuals' understanding (appraisal) of the "why" of traumatic events. Items such as “Wondered whether God had abandoned me”; or “Wondered what I did for God to punish me”, or “Wondered whether my church had abandoned me” from the Brief RCOPE (Pargament et al., 2011) illustrate the point.

If cognitive appraisals are indeed a key ingredient of the negative religious coping construct, and if religious struggle is linked to negative mental health outcomes, then it may be useful to directly examine the role of appraisal processes. One promising approach in this regard is the cognitive-behavioural paradigm (CBP), which explicitly emphasizes the function of negative cognitive interpretations in emotional distress. Furthermore, the schema model within the CBP postulates a deeper foundation for surface cognitions. Investigating religious beliefs using this deeper approach may therefore be a useful strategy to pursue. To this end, the epistemological foundation and key tenets of the CBP are presented in the next section. Following this, the key components of the schema model will be discussed. Ultimately, the goal is to offer sufficient detail on this theoretical framework and strengthen the case for its use as the overarching approach in the current thesis.

1.2.3 Cognitive Behavioural Paradigm

The choice of the cognitive behavioural paradigm (CBP) and the schema model (SM) as a framework through which to investigate how religious cognitive appraisals may be implicated in vulnerabilities to mental health problems is based on three important factors:

1. The paradigm articulates a clear mechanism for how cognitions (appraisals) are implicated in mental health problems.
2. The paradigm is the foundation of arguably one of the most empirically supported approaches for conceptualising and treating common mental health problems (David et al., 2018).

3. The paradigm has led to the development of treatments for a wide variety of populations (Kazantzis, Luong, et al., 2018) including indigenous Muslim populations as will be discussed in detail in the final part of this chapter.

However, prior to examining the basic tenets of the paradigm in detail, the epistemological foundations upon which CBP is built will be briefly discussed. This will help place the CBP in context and elucidate its theoretical underpinnings.

1.2.3.1 Epistemological Foundations of Cognitive Behavioural Therapy

Since its inception in the 1960s by Aaron Beck, cognitive therapy, or more commonly referred to presently as cognitive behavioural therapy (CBT), has attracted extensive research that continues to generate evidence for its effectiveness in treating a wide variety of mental disorders, including depression and anxiety (Chand et al., 2023). In discussing the epistemological foundations of Cognitive Behavioural Therapy (CBT), Beshai et al. (2013) identify two distinct historical trends. The first, which may be described as constructivist, is rooted in the philosophical belief that reality is socially constructed and an objective existence outside of societal frameworks cannot be known. This particular perspective, Ingram & Siegle (2001) argue, is in alignment with the early views of the founder of CBT, Aaron Beck, and his followers. The second trend, referred to as rationalism (or more accurately, rational empiricism), is based on the notion that an objective reality exists and can be accessed through the senses (Beshai et al., 2013). In other words, an objective world independent of sense perception exists, but that this world is also knowable to us through our sense apparatus.

While these differing epistemological perspectives may seem inconsequential in the context of everyday clinical practice, they do find expression in the language used by CBT therapists. For instance, the use of terms such as irrational versus maladaptive or cognitive distortion versus biases when describing negative cognitions reveals a therapist's underlying epistemic assumptions (Beshai et al., 2013). Such assumptions may in fact subtly impact a clinician's approach to treatment.

Tension between the two perspectives still exists on a theoretical level, but in terms of application, Clark et al., (2000) claim that more CBT modalities tend to implicitly favour the constructivist position. This view is contested by Dobson & Dobson (2018) however, who claim that CBT, in essence, endorses a more realist world view. This assumption, which Dobson & Dobson (2018) claim is held by the wider CBT movement, advances that an objective reality exists independent of us and is knowable to us. As can been seen, this is very much in line with the rationalist perspective mentioned above (with the difference being that rationalism is essentially an epistemology whereas realism is more accurately construed as an ontology). The clinical implication of this philosophical position is that the more an

individual accurately appraises the real world and adapts to its demands, the better mental health they will experience (Dobson & Dobson, 2018).

1.2.3.2 Basic Tenets and Implications of the Cognitive Behavioural Paradigm

The central tenet of Cognitive Therapy is that feelings, emotions, and moods are not directly caused by our interactions with the environment, but are instead mediated by our cognitive interpretations of these events/stimuli (Beck et al., 1979). This implies that the same external event can elicit different emotional reactions, depending on the meaning attributed to it.

For instance, two individuals can experience the same event and experience different emotions about it, and the same individual can experience the same event at different times and have contrasting feelings. In a clinical context, when an emotional reaction seems disproportionate to an event, the idiosyncratic interpretation is considered likely to explain the excessive emotional response (Westbrook et al., 2008). Therefore, to understand a person's distress, it is crucial to comprehend their individual way of perceiving the world (i.e., appraisals) and the significant events that trigger their distress (Kennerley et al., 2017).

Based on the foregoing, CBT interventions involve identifying biased cognitions (appraisals) and helping patients to consider all available evidence using a variety of techniques, with the goal being to modify these perceptions and align them with 'reality'. When evidence is not available, or when reality is particularly challenging, therapy aims to explore alternative interpretations that may be more helpful.

However, within a CBP, cognitions do not only consist of immediately accessible thoughts and images, but also comprise deeper level dysfunctional assumptions and core beliefs. According to Fenn & Byrne, (2013) dysfunctional assumptions are relatively rigid, conditional rules of living (e.g., If I try new things out I am bound to fail, so I better not try), or assumptions about oneself, others, or events (e.g., every person I meet must like me, otherwise I am an unlikeable person) that arise from deeper held core beliefs (Otani et al., 2017). Core beliefs, in turn usually have their origins in early childhood (although can also develop later as a result of traumatic events for example) and consist of more absolutist global beliefs (Kennerley et al., 2017) about oneself (e.g., I am worthless), the world (e.g., the world is a dangerous place) and others (e.g., others are judgemental). Even though these beliefs typically develop early in life, they maintain a strong influence on the way distressed individuals process future information by limiting their attention to those aspects of the environment that seem to confirm the beliefs, and thus reduce their ability to register disconfirming evidence (Dobson & Dobson, 2018). With

time, these beliefs become deeply entrenched, difficult to shift, and impose a schematic structure for current information processing and recall of past memory (Dobson & Dobson, 2018).

However, it is important to state that there is substantial inconsistency in the literature with regards to the nuanced meanings and conceptual implications of two related but distinct concepts: core beliefs and schemata. On a practical level this confusion again may not seem important, but theoretically these two terms are not synonymous, with each having important implications for understanding the baseline mental structures involved in mental disorders and how they influence more surface level automatic thoughts (and related emotions) and direct subsequent behaviour. The schema construct will be discussed next in order to lay the foundation for the operationalised definition of schema utilised in the current thesis and present arguments in support of its use as the underlying model.

1.2.3.3 Schema Construct

Perhaps the most important early psychological model of schema is found in the work of Jean Piaget (1896 -1980) who formulated a theory to explain the development and structure of schemata in children and adolescents. Piaget (1976) described schemata as mental structures that ultimately help us organise our complex environment into comprehensible categories through which we view the world. One of Piaget's many contributions to schema theory is that these mental structures, while relatively stable, are not immutably fixed during development; but can be changed when presented with sufficient and consistent new evidence. He further proposed that the default cognitive position of the individual tends to be to seek confirmation for a schema by attempting to interpret or change features of the stimuli so that they fit in with the existing schema – a process Piaget called *assimilation* (Hanfstingl et al., 2021). However, when there is overwhelming contradictory evidence resulting in significant cognitive dissonance (internal conflict), the schema itself is modified to account for the new information. When this happens, the process of *accommodation* (Hanfstingl et al., 2021) is said to have occurred.

1.2.3.4 Schema in Cognitive Behavioural Therapy

Piaget's schema theory was initially developed as a model for understanding typical cognitive developmental processes. However, the model also directly informed aspects of early CBT as it was construed by Beck (Leahy, 1995); and indirectly influenced Jeff Young's schema therapy (ST) approach through the work of Guidano & Liotti (1983), who themselves integrated the work of Piaget, Beck, and Bowlby (van Vreeswijk et al., 2012).

Before proceeding further it is worth noting that although Kelly's (1955) personal construct theory may have also been a viable model through which to conceptualise the construction and influence of religious beliefs and experiences, the CBP and schema model seemed to offer more possibilities and

has a more extensive research base backing its claims. So, the CBP-based schema model was adopted instead.

Of the abundant literature on the concept of schema, Williams (1997) remains one of the most useful and comprehensive examinations of the construct in clinical practice. Williams identified four definitional components of schema:

1. "Schema is a *stored body of knowledge* which interacts with the encoding, comprehension and/or retrieval of new information within its domain, by guiding attention, expectancies, interpretation and memory search" (Williams, 1997, p211). This is a general definition for the term and one that most theorists working in the field see as necessary, but not all agree is sufficient (Williams, 1997).
2. A Schema must also have "..*a consistent internal structure, used as a template to organise new information*" (Williams, 1997, p211). He cites the work of Bower et al. (1979) as evidence for the stereotypical structuring tendencies of schemata.
3. Another important and theoretically contingent characteristic of schemata is that knowledge contained within them "should be generic in nature, constituting relatively *abstract prototypical representations of environmental regularities*" (Williams, 1997, 211). An important point Williams makes here is that due to the utilization of this generic schematic prototype as a blue print "to impose structure, resolve ambiguity ….the final representation in memory therefore includes both elements from the specific stimulus event and elements from its generic prototype" (Williams, 1997, p. 211).
4. Finally, according to Williams (1997), before memory structures can be considered schematic "they must constitute a *modular package of such generic information*, in the sense that activation of any part will tend to produce activation of the whole" (Williams, 1997, pp. 211–212).

As outlined earlier, a basic tenet of cognitive therapy is that emotional experience is a consequence of the cognitive interpretation of events. These interpretations are determined by how the world is internally structured by the individual (Beck, 1967, 1976). Beck et al. (1979) equate their concept of underlying assumptions (both conditional/dysfunctional assumptions) with what in 1990 came to be called core beliefs (Beck et al., 2015) to schemata. These schemata are "relatively stable cognitive patterns" (Beck et al., 1979, p. 12) that are likely to be activated in situations similar to those in which they were formed in the first instance. Once activated, they influence attention and information processing in a direction consistent with their pre-existing mould.

Williams (1997) suggests that Beck's definition of schema meets at least the first and most important requirement of the concept, namely a "stored body of knowledge which interact with encoding, comprehension and retrieval of information" (Williams, 1997, p219). Furthermore, schemata, in Beck's conceptualisation of the term, form cognitive structures which in turn constitute larger patterns (Williams, 1997). This second aspect of a schema corresponds to Williams' description that schemata consist of modular packages wherein the activation of one part triggers the whole. Therefore, individuals who are vulnerable to emotional distress are presumed to be "characterised by the nature of those constellations of schemata concerned with interpreting emotional information" (Williams, 1997, p. 219). In this sense, depression, for example, could be seen as being linked to schemata concerned with loss, negative beliefs about self, the world, and the future (Williams, 1997).

Jeffry Young and his colleagues (Young, 1990, 1999; Young et al., 2003) developed the concept of schema further and founded a distinct system of psychological therapy based on this construct. Young et al. (2006) revised their earlier definitions and suggested that what they call "early maladaptive schemas" are to be understood as: a) "a broad, pervasive theme or pattern" that comprises b) "memories, emotions, cognitions, and bodily sensations"; c) concerning "oneself and one's relationships with others;" d) "developed during childhood or adolescence;" e) "elaborated throughout one's lifetime" (through selective attention and other information processing biases) and f) "dysfunctional to a significant degree" (Young et al., 2006, p7). As can be seen, this broader conceptualisation of the schema is much more in line with the later definitions of schema (see Kennerley et al., 2017) than the earlier formulation proposed by Beck; or the more pervasive use of the term in current clinical practice.

Before finally presenting the precise definition/heuristic of schema used in this thesis, it is important to make one final point. Namely, that there seems to be some confusion around exactly how schemata are conceptually distinguishable from core beliefs (Barazandeh et al., 2016; Kennerley et al., 2017). For example, where Beck employs the term schema to refer to both dysfunctional assumptions and core beliefs, Padesky (1994) uses it for core beliefs only. This trend permeated much of the subsequent use of the term in clinical practice, until Kennerley et al. (2017), who argues that the terms schema and core beliefs are not synonymous, because a schema is a much more complex mental structure than a core belief. However, they accept that core beliefs can be considered summary labels for schemata (Kennerley et al., 2017, p.209).

According to Kennerley et al. (2017), a schema should be understood as an overarching marker/label for a whole set of interconnected and associated conditional beliefs/rules, thoughts, feelings, and physical sensations. For example, the core belief: "I am useless" may be associated with the conditional

belief/rule: “I’d better not try because I am no good at anything”; the thought (e.g., after failing to remember just one item on a shopping list): “I can’t even remember simple things like an item on a shopping list”; feeling emotionally down and dejected; and experiencing physical sensations of heaviness and lethargy. The activation of this schema can then lead to behavioural responses congruent with the core belief. This constellation of rules, thoughts, feelings, and physical sensations are how Kennerley et al. (2017) understands a schema to be different from a core belief, with core beliefs being merely one aspect of a schema or a label thereof. This broader formulation of schema is very much in harmony with Young’s understanding of the construct.

The above describes the general structure and function of schema within a CBT framework. Schemata related to religion have been termed religious schemata (Streib et al., 2010) and pertain to individual representations, knowledge, and mental ascriptions about faith and religious practice. Such schemata are proposed to underlie human cognition, beliefs, and attitudes that help people rationalise the phenomena they encounter in life (Ardi et al., 2021; Hogg & Vaughan, 2022). For the purposes of this thesis then, a synthesis of Williams (1997), Young et al. (2006), and Kennerley et al. (2017), is applied to form a working definition of religious schema. This definition will inform all subsequent studies and will be referred to throughout.

A Religious schema is therefore hypothesised to be:

1. A broad pervasive mental structure with a consistent internal form used as a template that interacts with the processing of new information by guiding attention, expectations, and interpretation of such information.
2. It is represented as abstract prototypes of environmental regularities and can contain concrete memories, emotions, cognitions (core beliefs) and body sensations.
3. It is developed during childhood or adolescence.
4. It is reinforced throughout one’s life through 1 above (i.e., attention is more likely to be paid to information that is relevant, and that which is relevant is that for which a schema already exists).
5. It has a relatively stable because of 4.
6. It is modular in nature in that activation of one part produces activation in the whole.
7. It is primarily religious in nature when it contains religious themes.

1.2.3.5 Religious Beliefs as Schemata

Attempts to conceptualize religious beliefs as schemata are made by Lau (1989) and Mcintosh (1995). Both scholars underscore the utility of framing religious beliefs as schemata, even though they apply the schema concept to different aspects of religiosity (values for Lau, and coping for Mcintosh). Mcintosh's (1995) definition of schema aligns with conventional notions discussed in Williams (1997). Mcintosh (1995) also cites established research indicating that people possess schemata for numerous domains, including objects (Neisser, 1976), self, roles, and events (Fiske & Linville, 1980; Markus, 1977; Taylor & Crocker, 1981). He adds that a schema incorporates specifications on the relations between its different aspects (McIntosh, 1995). Consequently, he infers that a God schema, for example, may encompass not only beliefs about God's nature, will, purpose, influence, and attributes, but also the relationships between these facets.

Moreover, citing Taylor & Crocker (1981), Mcintosh (1995) contends, that since schematic processing seems to operate similarly across various abstraction levels, understanding lower-level schemata can inform our knowledge of higher-level ones, such as religion. Integrating these aspects of schema (specifically, the availability of schemata for diverse cognitive representations, the multifaceted nature of schemata with defined relationships between their facets, and the analogous operation of schemata at various levels of abstraction), it can be postulated that the analysis of individuals' beliefs concerning their perceived standing in the eyes of God could yield valuable insights into their conceptualizations of God's attributes. For example, a person’s belief that they are a sinner in the eyes of God despite their good deeds may reflect an underlying schema of God as fundamentally punitive and unforgiving. In other words, they may not explicitly state a belief in God as being punitive or unforgiving (in fact may consciously profess a diametrically opposing belief) but their view of themselves in relation to God justifies an inference that their belief in God is primary of someone who is punishing and unforgiving.

There is theoretical and empirical support for aspects of Mcintosh (1995) proposal of viewing religious beliefs as schemata (Koenig, 2009). Lipson (1983) for example, found that religious Catholic and Jewish children remembered more text-based propositions and generated more implicit recall for passages that were religiously familiar to them. They also committed fewer errors when recalling these culturally recognisable passages than neutral passages, and needed less time to read them. Lipson (1983) observed that participants were much more likely to understand text when they already held a culturally appropriate schema for it. Additionally, Pargament & DeRosa (1985) examined how students' beliefs regarding whether their lives are controlled by God or people influenced their memory of three different types of sermon-like messages (each promoting a specific configuration of personal and divine control). They found that messages consistent with participants' beliefs were

correlated with better recall of those messages and that messages were distorted during recall to fit more closely with participants' beliefs (echoing Bartlett (1932) seminal study).

One notable application of the religious schema concept in later research is found in the work of Streib et al. (2010). They developed the Religious Schema Scale (RSS), which demonstrated cross-cultural application to Muslim populations. Tekke et al. (2015) employed the scale to investigate Muslim religious openness schema in Malaysia, while Ghorbani et al. (2016) used it to study religious schemata within an Iranian context. Further discussion on the RSS can be found in chapter three. However, for the time being it suffices to say that given what has already been presented, conceptualizing religious beliefs as schemata is warranted and may in fact prove beneficial for studying how religious beliefs are related to mental disorder – especially when integrated within a paradigm, such as CBP, that explores the relationship between maladaptive schematic structures and psychological disorders.

Finally, it is important to reiterate the specific aspects of the religious schema examined in this thesis. Cognition is often regarded as a dual aspect concept, encompassing both the content of mental experience and the processing of that content (Gibson, 2018). Schemata are hypothesized to influence both the formation of content and the procedures by which this content is encoded and retrieved (Rumelhart, 2017). This thesis focuses on the *mental representation* (Mcintosh, 1995) of content within the religious schema. The use of the term representation is deliberate and justified on both scientific grounds (see for example Barrett & Zahl, 2013; Gibson, 2018) and as an ethical/cultural obligation. As such, this thesis emphasizes that the content of the schemata under examination represents idiosyncratic interpretations of beliefs held by the individuals being studied, rather than necessarily accurate reflections of the original teachings conveyed by the Prophet of Islam.

In conclusion, the purpose of this section of the introduction was to present and discuss the Cognitive Behavioural Paradigm and schema model. This was conducted in order to build a case for their use as the main theoretical framework for investigating the relationship between certain representations of religious belief and common mental health problems. The ultimate aim is to answer the research question of which, if any, representations for religious beliefs may be predisposing Muslim populations to the reported high prevalence of depression and anxiety. However, to address the research question effectively a review of existing CBT literature focusing on Arab Muslim populations is required. The following sections will undertake this review, aiming to assess the applicability of the Cognitive Behavioural Paradigm to Muslim populations, note any suggested adaptation, and evaluate the extent to which prior research has sufficiently addressed the core research question of this study

1.3 Critical Literature Review

Integrating religious considerations into CBT has become more evident in recent decades (Rosmarin, 2018). This concluding section of the introduction critically examines literature on the compatibility of CBT with Islamic principles, suggestions offered for adapting CBT to suit Muslim patients, efforts made at applying such adaptations, and the utility of CBT (with even minor adaptations) for the target population. Importantly, it also highlights notable gaps and limitations in the research.

1.3.1 Compatibility of CBT With Islamic Principles

In an early article examining the suitability of various psychotherapeutic modalities in Arab culture, Chaleby (1992) identifies the strong influence Islamic principles have on successful psychotherapy with Muslim patients. He also claims that Arab mental health professionals have observed that Arab patients may be less accepting of insight-oriented therapy than CBT. He suggests that the latter was also often preferred by psychotherapists because it avoids the ambiguity and abstraction intrinsic to more psychodynamic psychotherapies, offers more structure, and significantly, guidance. This paper was an early indication of both the importance of Islamic values to Muslim patients and the utility of CBT as model of therapy with this population. An example of the significance of religious beliefs to patients is also highlighted by Nielsen & Dowd (2006) through a patient Neilsen treated. They describe a woman who was struggling with a strong sense of guilt about her perceived role in her rape. With the aid of her therapist the woman discovered that her beliefs regarding her guilt around the rape were rooted in culturally related misunderstandings of religious teachings and when she reviewed the appropriate religious texts, was able to make helpful therapeutic shifts.

A more in-depth theoretical examination of areas of resonance between Islamic tradition and cognitive therapy was conducted by Thomas & Ashraf (2011). The authors make several recommendations on the incorporation of Islamic teachings into CBT based mainly on well-known Prophetic sayings (*Hadeeths)*. The general conclusions of their proposal are that CBT has a high degree of resonance with the Islamic tradition. The issue with their paper, however, it that it is primarily theoretical and lacks empirical evidence for its suggestions. Moreover, it only considers Islamic teachings in their abstract form, rather than what aspects of the tradition have actually been internalised by individuals, and to what extent these internalisations may be misinformed. The other observation is that the proposal relies heavily on Hadeeths as reference for congruence, or otherwise, with CBT. Hadeeths are the sayings and actions of the Prophet of Islam and are held in high regard by many Muslims. However, they do not rise to the level of the Quran in terms of authority or consensus. Many hadeeths' authenticity is questioned (Little, 2022) and the criteria for judging the validity/authenticity *(sihha*) of a hadeeth differs between Muslim sects. Although the claims of congruence between CBT and the

Islamic tradition seem valid in many cases, a stronger reliance on Quranic sources would have given the conclusions more credence and a wider appeal.

In their discussion of CBT, Amer & Jalal (2013) in general support the claim that cognitive techniques may be effective with Muslims patients and cite examples from Islamic texts as evidence for congruence between the two approaches. However, they warn against challenging some patients' beliefs, "particularly beliefs that are regarded as supernatural" (Amer & Jalal, 2013, p. 100). Here they make the important point that some non-religious therapists may consider such beliefs irrational and thus dismiss them as such. Obviously, such an attitude by a therapist is neither respectful of the client's worldview nor is it conducive to therapeutic alliance (Wampold, 2015). However, there may be a difference between dismissing a religious worldview in its entirety and challenging a belief based on an erroneous interpretation of the sources of that belief. In other words, it may be justifiable, and perhaps even clinically indicated, to question a belief that runs counter to perceptions of God as compassionate and merciful and thus challenge the belief from within the tradition itself. These therapeutically indicated and religiously congruent interventions are not discussed.

Beshai et al. (2013) is another important paper on the application of CBT with Muslim populations. This article, which includes a case study to illustrate some of their claims, is discussed here because not only does it attempt to identify specific areas of congruences and dissonance between the philosophical underpinning of CBT and what they call Islamic worldview, but the fact that the contributors to the paper include a world-renowned expert in CBT (Keith Dobson), make the claims about CBT worthy of attention.

Beshai et al. (2013) directly compare the philosophical principles of CBT and their understanding of Islam in six distinct areas: reality, empiricism, sources of individual misfortune, behavioural/emotional change, self-control, and individual rights; and in all these areas they postulate some disagreement between CBT and Islam. To give just one example, they contend that in terms of conceptions of reality, CBT holds that "objective reality does not exist and that individuals construct their own renditions of reality" (Beshai et al., 2013, p. 201), while Islam considers objective reality as existing, but is only partially accessible though the senses with the Quran being "the only tangible measure of reality" (Beshai et al., 2013, p. 201).

This formulation of the two conceptions of reality is problematic on both fronts. First, there is an issue with presenting CBT as a purely constructivist enterprise. Because, as discussed earlier, this is by no means a universally held position. Second, the authors view Islam, in a sense, as partially denying access to objective reality and limiting contact to it, with the Quran allegedly being seen as the only

measure of objective reality. This claim has limitations because it appears to ignore numerous verses of the Quran, which stipulate that: "We created not the heavens and the earth, and all that is between them, save in truth/reality[3]…" (Quran 15:85) and all the verses in the Holy Book that encourage contemplation of the natural world. In fact, a search of the Qur'anic text reveals eighteen verses that directly mention the contemplation of natural phenomena and that it (objective reality) was not created in falsehood/delusion[4]. The other claims made by Beshai et al. (2013) about the nature of CBT all seem justifiable, as do the assertions about so called Islamic principles, as long as we substitute the word "Islamic" for the world "Muslim". For there may be evidence for claiming that many Muslims dwelling in Muslim majority countries and living in the current period hold these views, but to assert that those are universal Islamic principles is open to debate (El-Islam, 1982).

Finally, the narrative review by Cucchi (2022) offers a careful analysis and a balanced argument for and against possible congruence between Islamic principles and CBT. The author cites many of the leading authorities in the current Islamic psychology movement (e.g., Badri, Haqq and Rothman) and classic scholars such as al-Balkhi (d.934) and al-Ghazali (d.1111) to support her claims. However, as is the case with the wider Islamic psychology movement, reliance on certain classical scholarship over others (such as the Ghazalian school over Islamic Rationalist school or even the Akbarian tradition) limit its conception of so-called Islamic psychology.

Moreover, the model of the psyche proposed by the Islamic psychology proponents (based in part on the aforementioned selected classical scholars) seems to lead to contradictory conclusions with regards to the possibility of convergence between so-called Islamic principles and CBT. On the one hand, they claim that CBT principles have strong echoes in the work of early figures such as al-Balkhi for example (Badri, 2013). On the other, they criticise CBT for being too secular and individualistic in its approach. This confusion arguably stems from a category error which attempts to compare a moral-spiritual model of the human psyche (Ghazalian model) concerned with *sulouk* (spiritual development) for well-adjusted individuals, with a therapeutic model, based on empirically derived cognitive and behavioural principles, that specifically targets thoughts and behaviours in treating psychopathology. CBT is not a spiritual system and the Ghazalian model is not designed for treating mental illness. A more fruitful approach would be to consider classical scholarship on how specifically cognition, within the intellect ('*aql*), operates, and ideas around reward and punishment (conditioning). On this specific point, one finds much agreements between CBT and Islamic conceptions. For Example, Ibn Arabi

[3] The world use in the Arabic here is 'Haqq' which can be translated into English as truth or more precisely 'real'. Indeed the famous Islamic studies scholar Prof. William Chittick often prefers to use the word 'real' to translate Haqq than the word 'truth' (see for example his book 'The Sufi Path to Knowledge' (Chittick, 2010))

[4] E.g. Quran 3:191 arguably the a more accurate translation of the Arabic *batilan* is falsehood or delusion

(d.1240) speaks of the intellect *min hathu howa qaabil*, from the point of view of it being a receiver of inspiration, and the intellect *min haythu howa mudabbir*, from the point of view of it being a planner and problem solver (ابن عربي, 1999) .The aspect of the intellect that is involved in planning and problem solving (i.e. cognition) is the aspect of concern for CBT and is acknowledged by ibn Arabi.

Finally, if comparisons are made on the basis of the intellect *min haythu howa mudabbir* (cognition) from an Islamic Akbarian perspective with CBT; and basic Islamic principles, then the idea of the existence of a real world, which is accessible (at least to some extent), that how this world is interpreted affects our inner states[5]; the importance of the provision of evidence to support claims made (e.g., Quran 2:111); the notion that we possess an element of free will (e.g., Quran 18:29) which allows us to affect change in our lives and when we cannot, learn to accept the situation (e.g., Quran 64:11); but continue striving nevertheless (e.g., Quran 3:186); and the importance of action in the form of behaviour (e.g., Quran 9:105), are all principles that find resonance in both the Islamic tradition and CBT (see previous discussion on CBT principles).

Notwithstanding some of the nuances regarding so called Islamic principles and the prior important distinctions between Islam and Muslims, the existing literature, on the whole (of which only a few examples are discussed above) seems to indicate a congruence between Islamic principles and CBT. While these predominantly theoretical considerations are valuable, they require more detail with regard to specific recommendations and call for empirical support to translate them into practical therapeutic adaptations for Muslim patients. These issues are the focus of the subsequent sections.

1.3.2 Adaptations Suggested and Adaptations Made

At the time of writing their chapter Abudabbeh & Hays (2006) observed that Arabs were among the least researched population in the psychotherapy literature (including CBT) and that up to 2006 there was limited empirical data regarding psychotherapy with people of Arab heritage. They do nevertheless acknowledge the existence of a number of published articles. For example, papers on traditional Arab beliefs about evil spirits (*jinn*) and the evil eye (*Ain*) (El-Islam, 1982); how culture and religion influence attitudes towards psychological help seeking (Abudabbeh, 1996); adapting western psychotherapy to suit the assumed collectivist family orientated Muslim patient and using a more goal focussed approach (Dwairy & Van Sickle, 1996), and cross cultural counselling with Palestinians (Dwairy, 1998). However, all the proposals suggested in these works are based on the authors' experiences (Abudabbeh & Hays, 2006) and not on any controlled studies. Regardless, they do seem

[5] One such Islamic concept is 'husn al Dhun' (changing thinking to consider positive alternatives) that Thomas & Ashraf, (2011) discuss in their article

to emphasise the points made above about the relevance of considering aspects of Islamic faith when working with Arab-Muslim individuals.

The suggestion that CBT is a more effective treatment modality than other approaches (including psychodynamic interventions), and the need to integrate Islamic values and tenets into treatment strategies finds support from authors such as Hodge & Nadir (2008) and Husain & Hodge (2016). However, while they argue that CBT does seems more congruent with Islamic values, they warn against the adoption of this therapy wholesale. They suggest, for example, that CBT's cognitive self-statements are overly individualistic and need to be reformulated so that they are more in harmony with a Muslim conceptual framework (Hodge & Nadir, 2008; Husain & Hodge, 2016). In doing so they suggest a number of modifications to what they claim are conventional CBT cognitive self-statements. While these recommendations seem reasonable to those familiar with working with Muslim patients, this very strategy (namely cognitive self-statements) is not one that is commonly used in current CBT practice; and even when utilised, therapists are always encouraged (indeed expected) to Socratically and collaboratively elicit these, rather than prescribe ready made statements to a patient.

Another set of recommendations for the adaptation of CBT for religious individuals with depression that does not suffer the same over-reliance on Hadeeth alluded to above are those proposed by Vasegh (2011). The author, using the Quran (and a limited number of Hadeeths) extrapolate three categories of religious therapeutically beneficial themes: (a) dealing with difficulties and troubling situations; (b) reconsidering patients thoughts about themselves and re-evaluating their religiously routed excessive sense of guilt; and (c) cultivating a sense of gratitude and tapping into other beneficial religious values. Vasegh (2011) illustrates the utility of adopting these religious concepts in therapy with three case examples. This paper is helpful in providing a resource for those seeking an entry point into using the Quran as a therapy aid. In addition, categorising the religious concepts in this manner helps organise that vast religious text into meaningful segments. However, while he recognises that "some negative thoughts" and resulting feelings (such as guilt) can be "based on religious grounds and taking them into account is necessary to help these religious patients effectively" (Vasegh, 2011, p. 177) he does not elaborate on the nature of these negative thoughts.

Some of the most important work in the field of cultural adaption of CBT for Muslim individuals is conducted by the Southampton group and colleagues. Naeem et al. (2019) is an informative summary of this work. It includes reflections on lessons learned from many years of research based on literature reviews, the production of treatment manuals, the translation of these manuals, and their subsequent testing through both qualitative studies and randomised controlled trials. Their studies have included participants experiencing both common mental health difficulties (Naeem, 2011a; Naeem et al., 2009,

2010, 2012, 2013, 2014, 2016a, 2019) and those struggling with more severe and enduring challenges (Naeem et al., 2019; Rathod et al., 2010, 2013, 2018; Rathod & Kingdon, 2014).

In their article Naeem et al. (2019) make a number of useful suggestions based on their previous work. These include therapists' need for sufficient awareness of the patient's culture and to prepare for therapy accordingly. This, they suggest, could be done formally (studying the literature), or informally through talking to someone from that culture. They also highlight the importance of religion and spirituality to many non-Western cultures and how these influence both conceptualisation of mental illness, and help seeking behaviour. Significantly, though briefly, they allude to how certain beliefs can give rise to myths that may not be helpful. For example, believing that not being a good Muslim can predispose one to depression (Naeem, 2011a). Another suggestion made by Naeem et al. (2019) is the need for awareness of linguistic nuances and how certain concepts are not shared cross-culturally. Giving assertiveness as an example, they recommend what they term the "apology technique" to approach this issue. Another suggestion is being sensitive to different evaluations of what constitutes dysfunctional beliefs, as what might be considered dysfunctional to a therapist may be normative in the client's culture. In addition, adapting assessment effectively can help improve outcomes. For example, asking the client what they believe is the cause of their illness and asking about any involvement they may have with faith healers; assessing for somatic concerns; evaluating beliefs around whether a lack of religiosity is seen as a predisposing or maintaining factor in the illness, et cetera. Further suggestions also include engaging patients in therapy through an initial focus on symptom management, paying attention to non-verbal cues, using successful examples from previous therapy to enhance confidence in the therapist, establishing personal connection with the client (by accepting gifts for example), and using family as a resource. Finally, adjusting therapy processes and techniques by adopting a more directive counselling style (at the initial stages at least) and being creative in using and recording homework tasks, focussing on more behavioural techniques, problem solving, muscle relaxation and breathing exercised can all be beneficial for the Muslim client. Informing patients of the number of anticipated sessions and the likely structure of these sessions is another recommendation the researchers make.

An issue of particular concern in this thesis is that of working with dysfunctional beliefs. Naeem et al. (2015) remind us that the identification of dysfunctional beliefs is a key component of CBT and that this process should include an examination of what might be culturally accepted. They do recommend treading with caution when dealing with this issue however, and that community members should be consulted if the therapist is unsure of the extent to which dysfunctional beliefs are incongruent with cultural norms. They do not, however, offer any recommendations regarding situations when these beliefs may indeed be culturally acceptable, but are nevertheless Islamically questionable and clinically

unhelpful, and when and how to challenge these. This seems to be a limitation in many of the studies reviewed and will be addressed more directly below.

Another important study because it is one that investigated the views of Arabian Gulf patients, carers, and mental health professionals on adapting CBT for this population is the qualitative study by Algahtani et al. (2019). Here the researchers confirm previous findings that for Saudi Arabian and Bahraini Muslim patients with depression and anxiety, CBT, even with minor adjustments, may be a helpful and acceptable therapy. Algahtani et al. (2019) assert that the issues raised by the participants in their qualitative study can "easily be incorporated into CBT" (Algahtani et al., 2019, p. 13). Using Naeem, et al. (2016) framework for cultural adaptations, some of the elements they call attention to include: better (more culturally appropriate) translations into Arabic; involving family in therapy; being aware of the gender dynamics between the therapist and patient and involving religious leaders in the therapy process. Notably, in terms of specific therapeutic techniques they reiterate that only minor adjustments are needed. Again, this study, albeit a qualitative one, is nevertheless one of the first of its kind to explore the extent to which CBT may be culturally adapted to meet the needs of a particular Gulf Muslim population. However, precisely because it is a study with a very limited sample size (patients *n*=42, caregivers *n*=11 and psychiatrists and psychologists (*n*=16), it is difficult to generalise any conclusions reached beyond the remit of the study. Moreover, even though Algahtani et al. (2019) explicitly allude to the importance of religious beliefs to the participants, they fail to examine which, if any, representations of these beliefs maybe playing an unhelpful role in the aetiology and maintenance of the patients' disorders.

In terms of attempts at applying adapted forms of CBT to Muslims, Walpole et al. (2013) concluded there is limited available research in the area and what is available is of poor quality. Nevertheless, following their systematic search of electronic databases and contact with experts in the field, Walpole et al. (2013) identify 25 studies that met their inclusion criteria. Among their most consistent finding is the utility of incorporating Islamic teaching into therapy (Walpole et al., 2013). They suggest that Islamic texts can be usefully employed to challenge patients' unhelpful beliefs. They cite Nielsen (2004) case report as an example of the use of an Islamic teaching that God is the only Judge, to challenge a client's negative view of herself and resulting low self-esteem. Another example of the utility of integrating Islamic teachings in therapy is highlighted by another paper reviewed by Walpole et al. (2013), where the therapist uses the Islamic precept that a person who has evil intentions but does not act on them is rewarded for their abstinence, to help reduce her client's excessive guilt (Aziz, 1999).

Another more recent study with an indigenous Muslim population into the effectiveness of adapted CBT techniques was conducted in Egypt. Jalal et al. (2017) describe how they modified CBT strategies

to work with Egyptian patients presenting with PTSD. They also discuss the use of a somatic complaints and cultural syndromes measure developed on the basis of their clinical experience with patients. They describe the use of specific Islamic practices such as *sala* (ritualistic prayer involving physical movements), *dua* (petitionary prayer), and *dhikr*[6] (chanting) to shift attention from rumination and to teach attentional control as adjuncts to conventional CBT therapeutic tools. They also discuss strategies they used to work with panic, deal with sleep issues, and to manage anger. They report case examples to illustrate the effectiveness of some of their strategies.

While making a useful contribution to the literature in the way of practical strategies drawn from religious resources, this study faces limitation due to the fact that data is based on the authors' own experiences and thus lacks wider testing for the effectiveness of their strategies. Furthermore, it also does not examine the role for unhelpful religiously based beliefs in the maintenance of PTSD symptoms.

In summary, adaptations of CBT that incorporate Islamic teachings seem to confer some benefit. But it is evident that more extensive and rigorous methodologies are required. This is because, with the exception of the promising work by the Southampton group project, many adaptation studies carried out in the Muslim world have often relied on individual researchers' experiences and case studies. Furthermore, there seems to be a persistent omission of any serious consideration of the role of maladaptive interpretations of religious based beliefs in therapy. Finally, it is worth reviewing the literature on CBT (with only minor adaptation) to examine to what extent such a modality can be useful even in its standard format.

1.3.3 Effectiveness of Standard CBT

One of the first meta-analyses to systematically examine the efficacy of standard (not adapted) CBT with Arab/Muslim populations across the MENA region, and restricting its inclusion criteria to those studies demonstrating high fidelity to the standard CBT model (consistent with Beck, 1979; Beck, 1995), is Kayrouz et al. (2018). This meta-analysis of the research on Arab populations experiencing depression, anxiety, and PTSD indicates the potential for this therapy being an efficacious and acceptable treatment of the disorders included in the analysis, in both face-to-face and remote (via Internet or telephone) formats. Of all the studies Kayrouz et al. (2018) initially examined (n= 536), nine met their eligibility criteria. Three of the nine studies (33%) were RCTs using waitlist controls. All of the studies reported statistically significant reductions in the symptoms of the target disorders, with

[6] Dhikr in the Sufi meditative tradition can take the form of a silent inward directed meditation on the name of God (as in the dhikr according to some Naqshbandi tariqas) or a chant as in, for example, the Shadhouli tariqa

relatively large effect sizes: anxiety (1.44; 95% CI [1.29, 1.59]), depression (1.26; 95% CI [1.16, 1.35]) and PTSD (2.08; 95% CI [1.94, 2.23]). Follow-up data provided by six studies (67%) showed maintenance of therapeutic gains at follow-up. The average drop-out rate of 26% suggests good acceptability of the therapy, according to Kayrouz et al. (2018). The mean remission rate for the five trials (55%) reporting this data was 31%. Interestingly, the five studies (55%) that reported on the deliverance of therapy remotely (internet or telephone) found similar effect sizes to face-to-face CBT.

On the whole, their results on the efficacy of CBT with Arab populations compares well when benchmarked against both face-to-face and iCBT meta-analyses studying Western populations (Kayrouz et al., 2018). They therefore conclude that CBT, whether delivered face-to-face or remotely, seems to be both efficacious and acceptable for treating adult populations experiencing anxiety, depression, and PTSD. One of the main recommendations to come out of this research include the "need to address specific cultural barriers such as gender norms and *religious beliefs* [emphasis added] about the aetiology of mental illness" (Kayrouz et al., 2018, p425).

However, as the researchers themselves acknowledge there are a number of methodological concerns that need to be considered when making any extrapolation from the results. First, many of the studies used in the analysis relied on relatively small sample sizes. Moreover, the samples used were gathered using convenience sampling methods. This issue necessitates cautious interpretation and generalisation of the findings. Second, only a third of the studies reviewed used RCT designs. Lack of control groups in the majority of studies raised the question as to whether the observed effects were due to CBT or time-related factors. Third, there are potential reliability issues with the index of clinically significant remission and deterioration used in many of the studies. However, with regards to this limitation, Kayrouz et al., (2018) point to research on the PHQ-9 (utilised within many of the studies included) that demonstrates a moderate agreement in the change reliability compared to the gold-standard clinical diagnostic interview. This suggests the index of remission and deterioration as a viable alternative when the gold-standard is not available (McMillan et al., 2010). Fourth, the researchers faced challenges in comparing efficacy and acceptability across disorders and designs due to the limited number of RCTs in Arab populations. Finally, the use of a simplified operational definition of Arab people may have overlooked important demographic aspects of Arab populations. Arab people were defined based mainly on geographic location or self-identity. This definition potentially does not capture relevant cultural nuances such as naturalisation, dual heritage status, and, in the Gulf, those non-Arab tribes settled in the Gulf regions.

Nevertheless, the overall trend found by Kayrouz et al. (2018) were further confirmed by a more recent randomised control trial into the effectiveness of two versions of internet based CBT for PTSD (a

regular protocol and a short version) in Arabic speaking countries. With a total of 244 participants randomly assigned to either condition, Böttche et al. (2021) found that symptoms of PTSD (as measured by the Posttraumatic Diagnostic Scale) reduced by 15 points in both conditions (regular and short versions), and that there were no significant between-group differences at post-treatment ($\Delta = 0.29$, $p = .896$, $d = 0.02$, 95% CI [-0.30, 0.34]). Furthermore, there was no difference in the dropout rate between the two conditions.

Although highly significant in the region, the study by Böttche et al. (2021) nevertheless has a number of key methodological constraints. First, and perhaps most relevant to assessing the effectiveness of standard CBT in Arabic speaking countries, the authors acknowledge that no fidelity ratings were conducted. This makes it more difficult to determine not only the degree to which content of interventions was comparable across treatment conditions but also how closely standard CBT protocols were adhered to. Second, the lack of an inactive control group makes it challenging to exclude natural temporal trends or other unmeasured phenomena as explanations for the improvements. Third, there are a number of sampling issues including the lack of power analysis for the sample size with recruitment being based solely on the study's funding period. Furthermore, the sample was predominantly young, well-educated females. Finally, the study experienced a high dropout rate and lacked long-term effect analysis (i.e., the study was limited to pre-post design without long-term follow-ups). All these limitations are highlighted by Böttche et al. (2021) with remedial measures suggested for future research.

Another pioneering study with an Arab population in the Arabian peninsula is a single group pre- and post-assessment design conducted by Cucchi et al. (2020). They studied 23 non-randomly selected individuals presenting with a primary diagnosis of OCD at two outpatient clinics in two teaching hospitals in Baghdad, Iraq, during 2016. The sample was also followed up and evaluated 6 months post treatment. Results showed a significant positive effect of CBT on OCD symptoms both at post treatment and follow-up.

Although Cucchi et al. (2020) employed two analytic approaches and found that their Bayesian approach produced more conservative figures than their frequentist strategies, the combined results of both analyses led them to confidently conclude that the longer an individual engaged in CBT in their study, the better the outcome they experienced and that this effect was maintained over time. Cucchi et al. (2020) compared the percentage of individuals remaining symptomatic at the end of treatment to other non-Western based studies and found that 36% of their participants remained symptomatic compared to 20% reported by Cordioli et al. (2003), a Brazilian based study. Cucchi et al. (2020) also discovered that commitment had an impact on outcomes. They measured commitment to therapy

based on the frequency of attendance to sessions and engagement in homework. They advise that special attention should be paid to commitment to CBT interventions in the Arabian Peninsula, in order to maximise the effectiveness of this approach.

Cucchi et al. (2020) single group pre-post study design however poses a challenge in terms of attributing improvements solely to the intervention. The very limited participants pool also precludes the generalisability of the findings to the wider population of the Gulf region. Furthermore, the absence of blinding procedures could have introduced bias, despite measures to mitigate this risk. However, notwithstanding these limitations, the study has made useful contributions to our knowledge of the potential effectiveness of CBT in Arab and Gulf populations. A main strength of the study is the fact that the researchers ensured high fidelity to quality CBT protocols in the delivered treatment. This was achieved by employing senior local psychiatrists who had completed CBT training and received ongoing supervision by a reputable mental health institution in the UK.

Overall it seems reasonable to conclude that the research presented above suggests that CBT, even with minor adaptations, may be an effective intervention for mental disorders experienced by Arab patients. However as highlighted several times, the absence of discussion on potentially neurotogenic beliefs is noticeable and worthy of special consideration. This is where we explicitly turn our attention to next.

1.3.4 Absence of Discussion on Maladaptive Interpretations of Religious Beliefs.

One of the criticisms of prior research levelled by the Walpole et al. (2013) review is the lack of discussion of the fact that the "positive role religion can play in treatment is dependent on how religious teachings are *interpreted* [emphasis added] by individual patients" (Walpole et al., 2013, p. 18). This failure, according to Walpole et al. (2013), is significant given that the wider literature (i.e., literature on religion and mental health in general) seems to emphasise the important role interpretations plays in mediating the positive effect of religious teaching (Pargament, 2001).

The significant role of unhelpful interpretations of beliefs in maintaining symptoms of mental disorder is often alluded to but insufficiently explored in various publications (some of which have already been discussed). For example, Beck (2016), asserts that some depressogenic beliefs may have an erroneous religious understanding content in them. These include the beliefs that depression may be caused by a lack of religious observance on the part of the patient, or shame-based beliefs held by the depressed person that they are a bad Muslim. Here, Beck (2016) acknowledges that: "There is a possibility that aspects of depression are maintained by unhelpful interpretations of Islamic thought" (Beck, 2016, p.

110) and suggests that “It might be possible for the therapist to support the service user in understanding these beliefs through Socratic dialogue…” (Beck, 2016, p. 110). He advises that when this is the case that it might be beneficial to seek the advice of community and religious authorities to identify more helpful interpretations of religious teaching. This is not only useful advice for therapists faced with this situation, but the explicit acknowledgement and emphasis by Beck (2016) of the maintenance of depression symptoms by unhelpful interpretations of religious teaching is a welcome contribution to the literature, even if his discussion lacks in detail.

Even the significant cultural adaptation work by the Southampton group suffers from this omission (namely the explicit role of interpretations derived from religious beliefs in psychopathology). An examination of their Culturally Adapted CBT (CaCBT) for Canadians of South Asian Origin Manual (Naeem et al., 2023) and the earlier Culturally Adapted CBT (CaCBT) for Depression Therapy Manual for use with South Asian Muslims (Naeem et al., 2013) found limited guidelines on working with maladaptive representations of religious belief. This oversight is worthy of note given the fact that they concede patients from non-western cultures hold religious beliefs in high esteem.

The overall impression formed from reviewing the research on CBT with Arab and Muslims populations is that the only studies that seem to explicitly discuss the nature and role of maladaptive religious beliefs in maintaining mental disorder are found in the OCD and scrupulosity literature. Md Rosli et al. (2021) define scrupulosity, a religious form of OCD, as: “a subcategory of obsessive-compulsive disorder which is presented as the excessive anxiety against sinning or committing immoral acts with or without religious compulsions e.g. washing and praying” (Md Rosli et al., 2021, p. 1).

A number of studies have examined the phenomenon of scrupulosity among Muslims (e.g., Ghassemzadeh et al., 2002; Karadaĝ et al., 2006; Nazar et al., 2011), noting however that this condition is not unique to Muslims, but exists in followers of other religions too. In their non-systematic review of the literature Md Rosli et al. (2021) found that scrupulosity-based obsessions in Muslims include worries that certain rituals are not performed perfectly, or having blasphemous thoughts, such as worshipping something other than God (Md Rosli et al., 2021). Compulsions on the other hand, take the form of carrying out pre-prayer ablution repeatedly or performing ritualistic prayer many times over (Md Rosli et al., 2021).

Although general OCD themes seem similar throughout Muslim countries, precise contents of these themes differ. Significantly where a culture places a strong emphasis on the ritualistic aspects of Islam (e.g., Saudi Arabia), religious OCD themes appear more prevalent when compared to more secular societies (Md Rosli et al., 2021). These observations were also previously noted in the study by Okasha

et al. (1994) in Egypt where they found that religious upbringing and an over-emphasis on religious rituals were associated with an increase in scrupulosity OCD in that country. Another study in Turkey found scrupulosity to be more prevalent in the more religious Eastern parts of the country compared to the Western regions (Karadaĝ et al., 2006). Overall, studies on scrupulosity in Muslim populations suggest that not only are religious cognitions related to symptoms of this sub-type of OCD but that certain types of beliefs are more significant in this relationship.

1.3.5 Conclusions of Reviewed Literature on CBT With Muslims

The review of the literature on CBT with Arab and Muslim populations presented in this section has yielded the following insights and perhaps justifies the subsequent conclusions:

a) Although not without exceptions, there seems to be some agreement in the literature on the compatibility between Islamic principles and CBT. Therefore, using CBP as a conceptual paradigm to structure investigations into the relationship between the role of religious beliefs and mental disorder is a justifiable strategy to pursue. Moreover, given the general alignment of the CBP with Islamic teachings, this strategy may minimise the amount of adjustment participants have to make when working within this theoretical paradigm.
b) While incorporating Islamic teachings in CBT shows promise, more rigorous methods are required. Many studies are based on individual authors' experiences or case studies.
c) There is emerging evidence for the effectiveness of standard CBT (i.e., even without adaptation) for Muslim populations, including those in the MENA region.
d) With the exception of the scrupulosity literature, a notable gap exists in the adaptation of CBT to Muslim populations research regarding sufficient examination of the role of maladaptive religious beliefs in mental disorders. This oversight persists despite the presence of literature that highlights the potentially important impact of these beliefs on psychopathology.

The last point is worthy of emphasis and further elaboration in the context of the approach and aims of the current thesis. As stated, while acknowledging the potential role that certain dysfunctional religious cognitions may play in the aetiology and maintenance of psychopathology, there is a noticeable lack of specificity in the research regarding the nature and content of these maladaptive cognitions. This surprising omission in the research, despite the universally acknowledged importance of accurate belief identification in CBT, may be due to a reluctance to address sensitive topics such as religious beliefs, or to a perceived lack of in-depth knowledge of Islam and the culture of conservative Muslim populations. However, with appropriate sensitivity, sufficient cultural competence, and suitable research methodology, the exploration of these issues is both feasible and necessary.

1.4 Current Thesis

1.4.1 Rationale for Thesis

Despite evidence suggesting religiosity has a positive impact on mental health, indigenous and often religious Muslim countries, such as those in the Gulf region, appear to exhibit a disproportionately high prevalence of depression and anxiety. Furthermore, research to date has largely failed to adequately address issues of causation or provide a comprehensive explanation for the phenomenon. This study aims to address this gap by exploring the relationship between religious beliefs and mental health in a conservative Muslim population, using a schema model based on a cognitive behavioural paradigm—a paradigm that has demonstrated its effectiveness in conceptualising mental disorder and one that has shown its utility with Muslim populations.

To achieve this aim, the research will attempt to answer the following questions:

1. Is there evidence of discrete cognitive structures, conceptualized as religious schemata, within the Muslim GCC sample being studied?
2. What is the nature and structure of these schemata?
3. Do these schemata contain maladaptive components?
4. If so, are these maladaptive components linked to depression and anxiety symptoms?
5. If a link exists, specifically which components are associated with depression and anxiety symptoms?

1.4.2 Research Aims and Objectives

The research will address the above questions by carrying out the following investigations:

1. Pilot a research tool based on CBT techniques that would facilitate the identification and conceptualisation of maladaptive representations of religious schemata (MRRS). The downward arrowing technique is one that is commonly used in CBT clinical practice to identify underlying schemata and associated core beliefs. However, as far as I am able to establish, this technique has never been used as a research tool—especially with a relatively conservative Muslim sample. So, a pilot study is deemed necessary to trial the technique and assess both its acceptability to the target population and its utility in eliciting core belief within a research context.
2. Use the piloted research interview technique with a wider sample, in order to identify underlying MRRS and collect qualitative data to inform the development of an MRRS based measure.

3. Develop and validate an MRRS questionnaire based on qualitative data gathered and extract significant factors (components) of MRRS.
4. Assess the relationship between the MRRS and symptoms of depression and anxiety. Also evaluate whether particular components (factors) of the MRRS are more predictive of common mental disorders than others?

All studies reported in this thesis were approved by the University of Reading Research Ethics Committee (stage 1, Ref: 2017-145-CS; stage 2, Ref: 2020-124-FO).

CHAPTER 2: A Pilot Study on the Cultural Acceptability of the Socratic Dialogical Interpre-Viewing as an Interview Technique

2.1 Introduction

Pilot studies are conducted to identify potential problem areas in a proposed study or to inform the decision-making processes when deciding between competing methodologies (Hassan et al., 2006; van Teijlingen & Hundley, 2002). Other uses for pilot studies include collecting preliminary data (van Teijlingen & Hundley, 2002), anticipating challenges with data collection and analysis procedures (Arain et al., 2010), informing theoretical sampling (Nunes et al., 2010), training and increasing familiarity and confidence in qualitative research tools (Ismail et al., 2018; Williams-McBean, 2019), identifying limitations of research methods and techniques (Maxwell et al., 2009), refining research instruments and protocols (Williams-McBean, 2019) and assessing the appropriateness of using oneself as a researcher with a particular cultural group (Kim, 2010). All of these factors were either direct or indirect motivations behind conducting the current pilot study.

Van Teijlingen and Hundley (2002) present several reasons for the importance of pilot studies and critique the tendency in the literature to underreport this work. They also observe that even when published, pilot studies seem to lack important details: namely, researchers often do not provide full descriptions of the study, limiting themselves to reporting only one aspect of it (e.g. a particular research method used or a particular tool tested). Even when pilot works are discussed more extensively in academic papers, "researchers regularly comment that they "had learned from the pilot study" and made the necessary changes, without offering the reader details about what exactly was learnt" (van Teijlingen & Hundley, 2002, p. 35). Finally – and equally salient – is the point regarding the utility of reporting failures in pilot studies. Not recounting shortcomings more explicitly deprives potential researchers, who intend to use similar instruments and research protocols, from useful learning that could help them avoid unnecessarily repeating others' mistakes (van Teijlingen & Hundley, 2002).

Of particular relevance to this study is the key role pilot studies play in assessing the feasibility of a study within a new cultural context. In her paper reporting on her preparation for a larger project on caregiving practices among Korean American families, Kim (2010) highlights the useful lessons she learned about working with a particular culture from the pilot she ran. Specifically, she made important discoveries about herself, the participant recruitment process and the interview schedule in light of the cultural context in which the study took place. For example, she eventually overcame the difficulties experienced in recruiting participants using 'community gate-keepers' when she realised that this method was futile. Instead, she used paid advertisement in local Korean-English language newspapers to recruit the participants. Kim (2010) then used this recruitment method in her

larger project. Additionally, she modified interview questions to consider what she had learned during her pilot study.

Pilot studies can also be very useful for novice researchers. For example, Wray et al. (2017) extols the virtues of conducting pilot work as part of her PhD thesis. She explains how the study helped her, among other things, to enhance her understanding of the qualitative research process, to develop personal and interview skills and to gain more confidence in the data collection tools she used.

Drawing on previous literature, and following discussion with the lead supervisor of this thesis, we (the supervisor and myself) concluded that a pilot study to trial key elements of the data collection tool, its cultural acceptability and assessing the utility and 'analysability' of resulting data would be an important first step in this wider PhD project.

However, as Levitt (2020) advises, before presenting key finding of a study and the methods used, it is important to offer a detailed description of the theoretical framework underpinning the qualitative work. Moreover, given that, as far I can establish, this is the first time the Socratic method has been used as a research tool, I believe that a comprehensive description of this method, including its epistemological foundations, influences and development, is necessary. Finally, because the study was conducted in a cultural milieu presumed not to be familiar to Western academics, further information on the study population will be provided.

2.2 Theoretical framework

2.2.1 Interview method

Qualitative research interviews comprise questions, delivered by an interviewer, designed to encourage an interviewee to talk "freely and extensively about the topic(s) defined by the researcher" (Howitt, 2019, p. 60). Interviews are the most common method used to collect qualitative data (Rodgers & Elliott, 2015) and have generally been classified into three categories: structured, semi-structured and unstructured (DiCicco-Bloom & Crabtree, 2006). Structured interviews tend to yield quantitative data (DiCicco-Bloom & Crabtree, 2006) due to the type of questions asked. Closed questions are often used in structured interviews where participants are required to answer pre-coded questions in a predetermined order (Fox, 2009). Unstructured interviews fall on the opposite end of this research method spectrum. These interviews require very little structure other than what the topic area/s under investigation dictate/s. In other words, the researcher approaches the interview with a general idea of the topic/s they want to discuss but does not normally pre-plan specific

questions. Rather, the researcher frames the questions in light of what emerges during the discussion (Fox, 2009). Unstructured interviews originated in the ethnographic tradition of anthropology and are often used in conjunction with the collection of observational data (DiCicco-Bloom & Crabtree, 2006).

Semi-structured interviews are the most common type of interview method applied in qualitative research (DiCicco-Bloom & Crabtree, 2006). In this form of interviewing, the questions are usually open ended but clearly organised around a number of relevant themes – with subsequent 'follow-up' questions evolving from the participants' responses. In psychology, semi-structured interviews have enjoyed increasing popularity since the 1980s, as evidenced by the growing number of qualitative interview–based studies published in the psychological literature (Howitt, 2019).

2.2.2 Interview methodology

Methodologically, research interviews draw on a number of theoretical perspectives and adopt a variety of approaches, including 'phenomenology' (e.g. Davidsen, 2013); 'ethnography' (e.g. Marcén et al., 2013), 'feminist' (e.g. Marecek & Magnusson, 2018), 'epistemic' (Brinkmann, 2013), 'post-modern' (Denzin, 2001) and 'hermeneutic' (Dinkins, 2005). There are other classifications for interview methodologies (see for example, Howitt, 2019; Willig & Rogers, 2017), but for the purposes of this study the categorisation proposed by Roulston and Choi (2018) is used because it uniquely identifies the hermeneutic interview as a distinct methodological approach. This form of interviewing and the epistemology behind it is pertinent to this study and will be expounded upon later. However, first a brief overview of the main strands of interviewing listed above is presented to distinguish these from the hermeneutic approach and to set the scene for the rationale for using hermeneutic methodology to inform the current interview schedule and style.

Ethnographic interviews, which usually involve observing participants, are suited to explore the meanings people ascribe to their actions in (and within) their particular cultural milieu, and expressed in their own language (Roulston, 2010, as cited in Roulston & Choi, 2018). Multiple interviews are usually conducted in ethnographic research and are accompanied by extensive field notes (Roulston & Choi, 2018).

Feminist approaches to interviewing represent another conversational qualitative data gathering method. They are arguably not distinguishable from other types of interviews based on their methodology as much as they are by their concern to reflect feminist interests authentically in advancing the equality for women in the research space (Roulston & Choi, 2018).

The post-modern approach to interviewing, on the other hand, is a distinct methodological approach that assumes "the interviewee has no essential self but provides various non-unitary performances of selves through his or her relationship with a particular interviewer" (Roulston & Choi, 2018, p. 236). This approach is very different to 'traditional' forms of qualitative data collection and produces what Denzin (2001) calls a 'performance interview' – performance because the claim is that we have no direct access to our world (because it is mediated through television, cinema and social media). Because we only have access to, and study, cultural representations, this type of social science analyses culture and society as 'dramaturgical productions' (Denzin, 2001). In their performances, "people *enact* [emphasis added] cultural meaning" (Denzin, 2001, p. 27). Therefore, interviews are ultimately performance texts (Denzin, 2001).

Phenomenological interviews, a more traditional form, are interested in "understanding the lived experience of people and the meaning they ascribe to that experience" (Seidman, 2006, p. 6). These types of interviews use open questions to yield rich, detailed accounts of people's feelings, perceptions and meaning making (Roulston & Choi, 2018). The data generated by these types of semi-structured interviews are painstakingly transcribed. The analysis requires the researcher to completely 'immerse' themselves in the data by assuming the participants' perspective as much as possible (Pietkiewicz & Smith, 2014). The researcher also carefully documents their own 'sense making' process as part of the analysis.

Unlike classic phenomenological interviews, which require adopting a neutral, none-directive stance (Roulston & Choi, 2018), hermeneutic interviews – especially those that draw on the Socratic method for inspiration – view the role of the researcher as a co-inquirer and place equal emphasis on the researcher's role in the dialogue in an effort to arrive at collaboratively informed findings. This type of interview style belongs to what Brinkmann (2013) calls the 'epistemic' interview. Epistemic in this sense means an approach that seeks to arrive at 'justifiable' knowledge as opposed to the 'doxastic ' interview, which elicits (mere) opinion or belief (Szaif, 2007) – characteristic of the more phenomenological approaches.

One type of hermeneutic interviewing that places more emphasis on the epistemic methodology is that of Christine Dinkins (Brinkmann, 2013). Dinkins (2005) acknowledges the utility of phenomenological approaches in generating important data for much qualitative research but critiques this methodology for its lack of opportunity for either the researcher or the participant to reflect on the ideas emerging in the interview. Dinkins (2005) recommends adopting what she calls the "Socratic hermeneutic interpre-view" (SHI-v) as an alternative data collection tool.

Given the nature of the data sought in this thesis, a method that allows for deeper probing while permitting critical discussion is necessary. This new method consisted of incorporating elements of the SHI-v into the Socratic method of traditional cognitive behavioural therapy (CBT). Below is an elucidation of both techniques and the way in which skills from one were integrated with the other to form the new research tool.

2.2.3 The SHI-v

The adjective 'Socratic' that Dinkins (2005) uses to describe her method of research interviewing refers to the philosopher Socrates (c. 470–399 BC). Socrates' teachings and method of enquiry were related to us through his student Plato (c. 427–347 BC). On more than one occasion in Plato's dialogues, Socrates' method for 'discovering' knowledge, and his role in applying this method, is likened to that of a midwife (Dinkins, 2005). Dinkins' (2005) explanation of this analogy captures the essence of the technique and is paraphrased below:

In ancient Greece, a midwife was a woman who could not bear children herself; likewise, Socrates thought of himself as lacking in any knowledge whatsoever and was therefore unable to deliver it to the world. A midwife also performed other duties such as matchmaking. Similarly, Socrates saw an aspect of his roles in engaging in a dialogue of discovery as one of presenting ideas together (elicited from the co-inquirer during the discourse), inviting the co-inquirer to consider them in a partnership and working out how they relate to each other – and whether they can in fact cohabit. Finally, the task of a midwife is to help deliver new-borns. This too reflects what Socrates saw as his ultimate function when participating in a dialogue – namely, that of helping his co-inquirer 'deliver' their hopefully well-formed ideas. The 'Socratic' aspect in the title 'Socratic hermeneutic interpre-view' ultimately then refers to an approach to interviewing that is curious and open and where knowledge is assumed to be present in the other. That knowledge is made manifest through a process of careful questioning.

The term 'hermeneutic' Dinkins (2005) uses to describe her method has its roots in the hermeneutic phenomenological school that emerged from the philosophical tradition of Heidegger and Gadamer. Dinkins (2005) presents a sophisticated exposition of this method and its philosophical foundations. For the sake of brevity, the term, as she uses it, describes an approach to inquiry where 'meaning' and concept formation is a collaborative process between the interviewer and co-inquirer (participant). In other words, both generate meaning together through the dialogue that takes place between them.

Finally, 'interpre-view' is a creative portmanteau of the words 'interpretation' and 'interview'. Here she is referring to a process whereby the interpretation of data occurs simultaneously through (and within) the dialogue (Dinkins, 2005). Traditionally, qualitative analysis of interviews occurs after the interview has ended – in fact, after the interview has been transcribed, reflected upon and subjected to a thematic analysis of some sort. In 'interpre-viewing', the analytic process and interpretation commences during the interview. This allows the interviewer to test out their hypotheses and to verify the validity of their interpretations in 'real-time' (i.e. during the interview itself).

To summarise: the SHI-v recommended by Dinkins (2005) is a method of inquiry where a researcher and co-inquirer engage in a dialogue (initiated by the researcher who assumes no prior knowledge – even if they hold tentative initial hypotheses). Through questions and responses, both the researcher and co-inquirer are encouraged to reflect together on the concepts that emerge and take shape within the interview (Dinkins, 2005). Dinkins (2005) outlines the typical steps followed in the SHI-v:

1. Define terms (prior definitions) (e.g. through the use of analogies, examples etc.);
2. Point out conflicts;
3. Reword the co-inquirer's statements;
4. Ask about ideals;
5. The hermeneutic circle of Socrates (*elenchus*);
6. The interpre-view process;
7. The hermeneutic circle and *aporia*.

Two specific components of the SHI-v were incorporated into the final interviewing approach used in this study: the *interpre-view* and the *hermeneutic circle*. While these two elements are arguably present in the standard CBT Socratic method and may be referred to by different names, they have been explicitly emphasised here so that in the final interview style, they can function more as an information-gathering tool than as a therapeutic change method.

2.2.4 The Socratic method (and dialogue) in CBT

The utility of the Socratic method in traditional CBT (Kazantzis, Beck, et al., 2018; Kazantzis et al., 2014; Kennerley et al., 2017; Overholser, 2018; Padesky et al., 2023; Padesky, 1993) and the role it plays in the therapeutic process are well documented (e.g. Clark & Egan, 2015; Heiniger et al., 2018). It is also apparent to anyone familiar with the Socratic method used in CBT that there is significant convergence between this and the SHI-v described above.

While attempting to introduce the Socratic method, it is important first to note that the word 'method' (in Socratic method) is often used interchangeably with other similar terms such as 'dialogue', 'questioning', 'reasoning', etc. There is substantial disagreement in the literature as to the precise definition of the Socratic method (Clark & Egan, 2015), and it is beyond the scope of this introduction to elaborate on this issue. For a detailed discussion on some of the confusion around terminology and the practical implications, see Carey and Mullan (2004). For the purposes of this study, however, it is important to at least clarify how the phrases Socratic method, Socratic dialogue and Socratic questioning in particular are used given their direct relevance to the style of the interview conducted in this thesis.

According to Kennerley (2017), the Socratic method is a generic term used to refer to a range of interventions designed to help clients learn how to help themselves. Therefore, the Socratic method, includes a lot more than inquiry (or questioning). If we bear in mind that one of the main aims of Socratic questioning is to help clients consider possibilities that are outside their current conscious frame of reference, then this can be achieved through other means too (i.e. other than questioning) – for example, by presenting dilemmas to clients, through well-timed summaries, reflections on behavioural experiments, etc. (Kennerley, 2017).

So, the Socratic method is a term best used to describe a range of interventions that help clients construct new ways of looking at things. Socratic dialogue, on the other hand, refers to the actual verbal exchange (i.e. the dialogue) that takes place between the inquirer and co-inquirer. Padesky (1993) delineates this as a four-factor process of information gathering through questioning and review. Finally, Socratic questioning refers to a specific style of question delivery and the types of questions asked by the inquirer.

In terms of the questioning style, Padesky (1993) warns against the temptation (in clinical practice at least) of using Socratic questioning as a method of changing minds, or even as Kennerley (2017) warns, as a means of proving the questioner's point. Padesky (1993) presents several arguments as to why she cannot accept this use of Socratic questioning and proceeds to offer her definition of inquiry based on the overarching principle that Socratic questioning is ultimately a tool to 'guide discovery' for both the client and therapist and one where the therapist must always maintain a 'curious' stance. According to Padesky (1993), Socratic questioning is evident when:

1. The client is asked questions that they can actually answer (rather than factual questions for which they may not know the answer).
2. The client's attention is drawn to issues under consideration which the client had not previously considered.

3. The questioning process moves from the concrete to the more abstract so that the client can eventually apply the new learning to either evaluate previous conclusions or to build new understanding.

In a later paper (Kazantzis et al., 2014, p. 4), Padesky summarises her views of what constitutes Socratic questioning, or more broadly, Socratic dialogue, as follows:

> I see Socratic dialogue as a verbal method in which we are using questions to broaden the client's perspective and to draw their attention to information that is relevant to the beliefs that we are testing out and the behaviours we are evaluating.

In the quotation above, Padesky uses the word 'dialogue' in relation to Socratic questioning but she does so intentionally, perhaps to draw attention to another important feature of this style of questioning. Padesky declares:

> I like to call it 'Socratic dialogue' because I think that it is equally important that we listen to what the client says and responds to our questions and that we agree to follow where the client's answers lead us… (Kazantzis et al., 2014, p. 4)

Based on what has been discussed so far regarding the nature of the Socratic method, and the different ways in which it has been described, the interview technique used in this study may be better described as a Socratic dialogue than the Socratic method.

As far as this pilot study is concerned, although some of the conditions stipulated by Padesky for a Socratic dialogue are met, I did not intentionally seek to build new understanding (although the co-inquirers may develop new perspectives coincidentally). Instead Socratic dialogue was used as an information-gathering tool rather than an instrument for therapeutic change.

2.2.5 Downward arrowing

I thought that an important technique within the Socratic method, commonly called downward arrowing, would be particularly useful given the pilot's aim to investigate underlying beliefs. Therefore, it was explicitly incorporated into the interview style. Downward arrowing, sometimes referred to as vertical arrow restructuring (Kennerley et al., 2017), is a technique designed to elicit deeper beliefs and assumptions (Millings & Carnelley, 2015). Kennerley (2017, p. 167) describes downward arrowing as "a type of systematic questioning that aims to help clients elaborate on, or "unpack", their experience or NATs [negative automatic thoughts] and perhaps identify the more fundamental

meanings underlying an unwanted reaction". Although this type of questioning is routinely used in CBT, to the best of my knowledge it has never been used as a research tool.

In CBT, cognitions that are accessible to conscious awareness are called automatic thoughts (ATs), with the more troubling, or unhelpful thoughts, are often referred to as negative automatic thoughts (NATs). The downward arrowing process starts with the questioner noticing an emotionally significant NAT or image, and upon identifying this 'hot' thought the questioner proceeds through a series of carefully paced and delicately delivered questions to uncover an emotionally meaningful 'core belief'. This considered series of questions (downward arrow) is interspersed with regular summaries, clarifying questions and checking-in with the client that it is ok to proceed further.

2.2.6 Interview schedule and style tested in the current study

The SHI-v is primarily a research tool whereas CBT Socratic dialogue (CBT-SD) is a therapeutic strategy. Despite these differences in function, the two techniques share the same overall style, with subtle but relevant differences in emphasis and approach. So, the adapted interview technique used in this study essentially consists of implementing the CBT-SD method as the overarching framework for the interview with some SHI-v skills explicitly incorporated to allow the interview to function more effectively as a research tool. The CBT-SD scaffold comprises the main CBT Socratic questioning/inquiry skills, downward arrowing and, importantly, common factors skills. The main SHI-v additions include integration of the interpre-view and hermeneutic circle into the final schedule (in other words: 'emphasising' these skills that already exist within the CBT Socratic method but that may be given different labels). Below is a detailed description of the components integrated into the new interview technique, the subtle changes in emphases made when incorporating these skills into the final interview format and the rationale for doing so.

1. Explicit versus implicit common factor skills

Although Dinkins (2005) is mindful of the necessity to be sensitive to the co-enquirers' needs and to check-in with them to ensure that they have not been misunderstood or misstated, there is no mention of the requirement for explicit empathy statements or what therapists call 'common factor skills' (Nahum et al., 2019). These common factor skills include alliance, collaboration, empathy, positive regard and congruence/genuineness (Nahum et al., 2019). CBT-SD, on the other hand, is primarily a therapeutic tool and is thus explicit about applying these skills throughout the interview process.

As Brinkmann (2007) argues, the process of allowing co-inquirers and researchers to openly challenge each other improves the validity of the final analysis, and this approach is more likely to be in line with the original penetrating elenchus style (see, for example, Fairburn's contribution in Kazantzis et al., 2014). However, this approach may not be helpful when exploring potentially emotive topics (such as deep personal religious beliefs within a religiously conservative culture) or when aiming to create a context of collaborative curiosity. It is for this reason that the explicitly empathic atmosphere created by CBT-SD is emphasised in the interview style adopted here.

2. Implicit versus explicit interpre-viewing

The SHI-v is clear about incorporating the interpretation of the co-inquirer's answers within the dialogue itself, while CBT-SD only implicitly assumes this occurs routinely during the discussion. As part of the interview methodology used in this study, the inquirer's interpretations of the co-inquirer's statements needed to be shared with them regularly to ascertain whether the inquirer's conclusions were true to the co-inquirer's intended meaning. This strategy limits researcher-biased interpretations and provides stronger fidelity to the co-inquirer's lived experiences.

3. Affective versus rational discourse

As a clinical tool, CBT-SD is concerned with understanding emotional distress while the SHI-v, as a research tool, seeks to gain insight into a phenomenon that is assumed to be expressible through rational discourse. Therefore, effective CBT-SD seeks out emotional expression and once identified (either verbally or through non-verbal cues) follows it to its presumed cognitive correlate (Beck et al., 1979). The process can also work in the opposite direction, that is, identifying hot cognition and thereafter exploring associated emotion. On the other hand, the SHI-v does not presuppose affect but rather proceeds through rational/cerebral dialogue. In a study such as this where delicate issues are the target of investigation, a technique that is sensitive to changes in emotional temperature and how to navigate these is important. So, it is essential to employ classic CBT strategies to contain affect and to provide a sense of emotional 'safety' while at the same time carefully pressing ahead. The most important of these strategies is therapeutic common factor skills.

4. Downward arrowing and closure versus aporia

Even though the idea of unpacking meaning is also an important feature of the SHI-v, there is no direct allusion to a vertical descent into deeper emotionally laden meanings. Indeed, there is certainly no technical guidance on how to proceed in this direction. On the other hand, CBT-SD provides a clear strategy for doing so, namely downward arrowing. Again, given the nature of the study, a clear strategy for delving deeply, but carefully, is required. An equally important consideration is that the downward arrowing process is rarely satisfied until a meaningful underlying belief is identified and some sort of

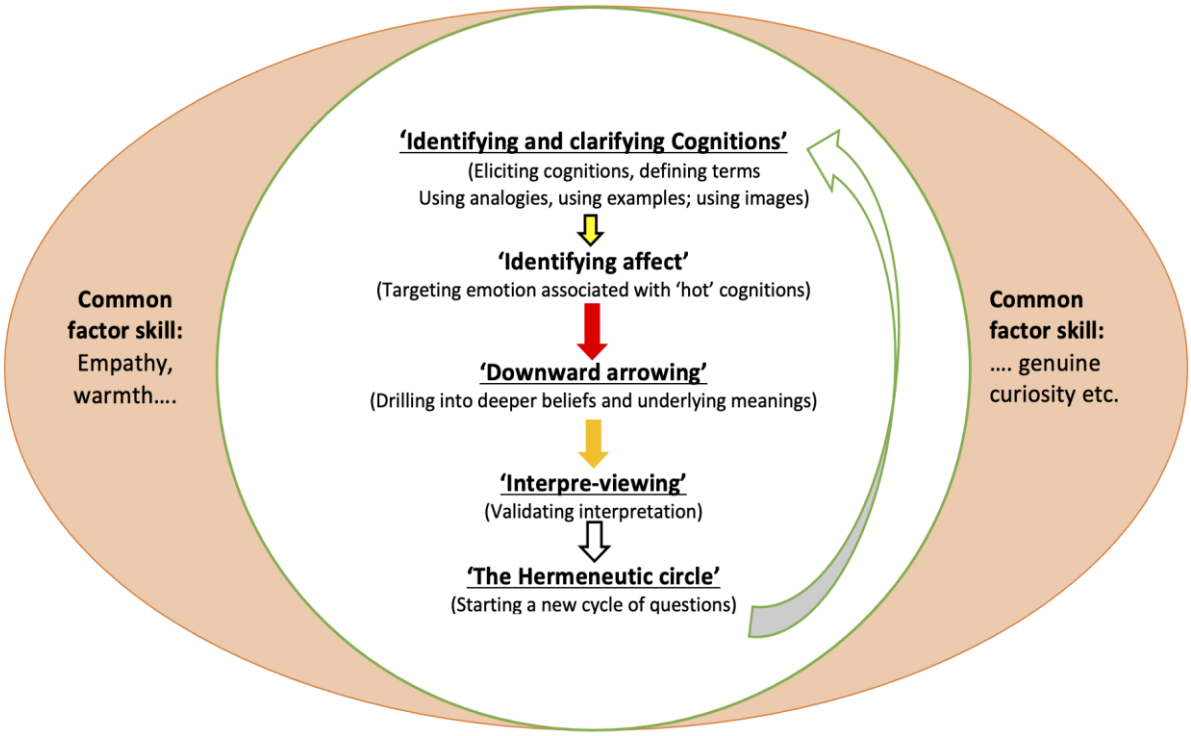
initial closure is achieved. Aporia in Dinkins (2005) method, on the other hand, values the sense of lack of resolution often experienced at the end of many of Plato's dialogues. Dinkins (2005, p. 42) writes:

> Just as Socrates' dialogues end in aporia, most Socratic-hermeneutic interpre-views are likely to end in much the same way. It would be unreasonable to expect otherwise, to expect that by the end of an hour or even more, the co-inquirers would have the phenomenon entirely revealed to them. This aporia can be immensely helpful to both the researcher and the co-inquirer. The co-inquirer is likely to go home and think on the phenomenon more, thus gaining insights into her own life and experiences.

While it is not difficult to sympathise with Dinkins' position regarding research where such aporia can be tolerated and even useful; in some cases, such experience may place too much of a burden upon individuals who are disclosing uncomfortable material. I felt that during discussions with the co-inquirer's consulted in this study, sharing a clear sense of how the interview was going to proceed and what conclusions might be drawn from it would be important. Moreover, I believed that by bringing the interview to a definite close (both conceptually and procedurally), the I would be better able to determine if there were any outstanding issues that the co-inquirer felt, or I suspected, needed to be addressed before they left the room (the main concern here being the persistence of any distress caused by unresolved issues emerging during the interview).

Figure 1 summarises the elements from the SHI-v emphasised in the adapted CBT-SD to form the interview technique used in this study, which will be referred to as the 'Socratic dialogical interpre-view' (SDI-v). I am aware that this is not a fully tested interview schedule, so this designation is used here for convenience and utility. The initial stage of this new technique consists of identifying and clarifying cognitions. It then proceeds to target affective 'hot cognitions' and uses these to downward arrow to underlying meanings. Interpre-viewing then seeks to confirm and validate understanding and once achieved, a new 'hermeneutic cycle' of questions that either approaches the same question from a new angle or starts a new investigation commences. All these sub-techniques are delivered within an empathic, warm, validating, sensitive, genuine yet curious atmosphere.

Figure 1 *A diagrammatic representation of the Socratic Dialogical Interpre-view*



2.3 Demographic, religious and cultural contexts

The study took place in a university in a GCC Country (see chapter 1, section 1.1.2 for more demographic information on GCC countries). All GCC countries share a common religion – Islam – with different nations and groups within countries subscribing to different *madhabs* (schools of Islamic jurisprudence) and sects (namely, *Sunna, Ibadhi* and *Shia*). Traditional customs, religiosity and religious practices are strongly valued in these countries (Salam, 2019). However, with globalisation and mass social media, the young are increasingly being exposed to other cultural expressions, thus leading to signs of tension between modern and traditional lifestyles (Salam, 2019). Some suggest that the strongly rooted traditions and religious practices lead to a cautious attitude towards so-called 'modern' values (private conversations with local colleagues). However, with the growing number of "Western-educated and multi-cultured, technology-savvy people in the region (both natives and immigrants), these values are changing toward an openness to modernization and modern lifestyle" (Salam, 2019, pp. 20–21). Nevertheless, there is still unease between traditional norms and modern ideals (Salam, 2019). The elders and community leaders recognise these issues and consistently find new and creative ways of meeting these challenges.

2.4 Main aims and objectives of the current study

There were two main aims for this pilot study. The first was to pre-test the utility of the SDI-v as a research tool to identify underlying theocentric 'core' beliefs and assumptions. The two objectives were (a) to assess the fidelity of the SDI-v to the Socratic method and (b) to examine the resulting interview data for evidence of theocentric core beliefs and underlying assumptions.

The second aim was to test the cultural feasibility of using the SDI-v as a research tool within a conservative Muslim environment. The objective was to gain feedback from the co-inquirers as to whether the interview process is appropriate and acceptable.

2.5 Method

2.5.1 Design, planning and procedure

The underlying epistemological approach used in this qualitative pilot study is best described as 'subtle realism' (Hammersley, 1992, as cited in McCluskey et al., 2011). This approach occupies an epistemological middle ground between 'positivism' and 'constructivism' in the sense that it posits the existence of a knowable objective reality while at the same time acknowledging that any conclusions drawn about the nature of that reality are not unaffected by the perspectives of the researcher (McCluskey et al., 2011). As explained above, methodologically the approach is essentially Socratic hermeneutic based on the work of Dinkins (2005) and delivered within the framework of the CBT Socratic dialogue.

An important consideration was how to assess the adherence of the interview style to the Socratic method (with the SHI-v adaptations) given that there are no current assessment tools for this type of interview. So, in consultation with the second supervisor regarding how to assess adherence to the CBT Socratic method, the decision was made to use the relevant domain within an existing CBT assessment tool called the Assessment of Core CBT Skills (ACCS; Muse et al., 2016). Domain 9 within the ACCS was designed by members of the Oxford Cognitive Therapy Centre (OCTC) specifically to evaluate Socratic skills.[7] It is important to note that the second supervisor (and rater) was not aware at any stage during the initial SDI-v development phase of the explicit incorporation of the SHI-v skills into the CBT Socratic method. This approach was used to establish whether, while being 'blind' to these modifications, she would make comments that could be interpreted as evidence of SHI-v skills.

[7] It is important to disclose that domain 9 is not included in the original ACCS (Muse et al., 2016); it is derived from it and is used routinely by the OCTC to evaluate their trainees (H. Kennerly, personal communication, February 3, 2022).

This would then be seen as an indication for the assumed presence of the SHI-v skills while at the same time controlling for potential rater bias.

I submitted the first of the three interviews conducted to the second supervisor for assessment using ACCS domain 9. If she observed evidence of all the necessary skills, then I could proceed to the rest of the interviews with some confidence that the SDI-v was being applied competently. I would also learn from the feedback about any changes that needed to be made before proceeding to the second interview.

Ethical approval was granted by both the University of Reading and the Gulf University that hosted the study prior to its commencement (Ref: 2017-145-CS and ERS_2018_5699, respectively).

2.5.2 Co-inquirers

Convenience and snowball sampling were used to recruit the three co-inquirers who took part in the study. The data collection procedure involved me soliciting referrals from my professional network, who then approached potential co-inquirers within their own networks. Upon identifying potential Co-inquirers, they were approached by myself who explained to them, in person, the nature of the study, the length of the interview and all matters concerning consent and confidentiality. Demographic information was collected from these co-inquirers by means of a detailed demographic form that they completed prior to the interview (see appendix 6). Consent forms were also signed before commencing the interviews (see appendix 3).

Co-inquirer 1

The first Co-inquirer interviewed was a 34-year-old Egyptian woman. Nafisa (a pseudonym) was born in a bustling metropolis but grew up in Saudi Arabia. She is an only child but has a good extended family support system that was particularly needed following the death of her father when she was only 8 years old. Nafisa is married and has three children. She self-identified as 'upper-middle class', having graduated and worked as an architect while she was living in Egypt. Nafisa, her physician husband and their three children moved to the UAE 5 years ago. At the time of the interview she had been working as a teaching assistant in an expatriate school for three years. She reported a difficult relationship with her mother (who resides in Egypt but keeps regular contact with Nafisa and sees her during school holidays).

Nafisa described herself as 'not religious' in terms of adherence to regular rituals but very observant of the moral and ethical codes of Islam. In terms of religious doctrine, she follows the Asha'ri school

of aqeeda (theology/doctrine) and when she does, she observes religious rites according to the Shafi'i school of jurisprudence. Nafisa denied any history of physical or mental health problems.

Co-inquirer 2

Grace (also a pseudonym) is a 32-year-old Ugandan woman. She came to the UAE on a work visa and was working as a nanny and a domestic helper at the time of the interview. Grace has two younger siblings who live in Uganda. Both of grace's parents are deceased, but she saw her extended family – especially her aunt – as a good source of support and comfort. Grace is married and has two children who live in Uganda with their father. She gained a technical college qualification and then trained as a primary school teacher. Grace subsequently worked as a teacher in her home country before coming to the UAE. She was living with the Emirati family that sponsored her visa and for whom she worked as a nanny.

Grace considered herself a practicing Muslim but cannot identify to which school of doctrine or jurisprudence she belongs. She said she came from a religious family and disclosed that she had a history of depression but denied any symptoms of the condition during the period of the interview.

Co-inquirer 3

Co-inquirer 3 was a 32-year-old man of Syrian origin (henceforth called Rami). Rami worked as the head of the Arabic department in an expatriate primary school, was married and had one child. He reported having good family support from his wife, siblings and extended family. Rami has a master's degree but received a traditional Islamic education while growing up and described himself as an observant Muslim. He subscribes to the Asha'ri doctrine and follows the shafi'i school of jurisprudence. He denied any history of mental health problems and reported being in good physical health.

2.5.3 Researcher characteristics

"In qualitative research, the researcher serves as the 'instrument' through which data are generated" (Dinkins, 2005, p. 111). Therefore, it is important for the researcher to be aware of their own 'situatedness' when engaging in such endeavours (Levitt, 2020). This seems to be especially pertinent when the researcher has emotional and personal connections to the topic under investigation (Morrow, 2005). Moreover, 'owing one's perspective' (Elliott et al., 1999, as cited in Morrow, 2005) and being explicit about one's connection to the subject matter allows the readers to reach their own conclusions regarding the extent of the researcher's influence on the data-gathering process (Morrow, 2005), as well as the extent to which any conclusions drawn are generalisable beyond the immediate

remit of the study. For these reasons, a brief sketch of those elements of my biography that I believe to be directly relevant to the study are presented below.

I am a practicing Muslim who grew up in a conservative Muslim household. I am a North African Arab by birth, and while raised in the UK have nevertheless maintained a strong link to my native Arab heritage. My relationship to my Arab roots is complicated as I have experienced significant challenges while attempting to reconcile the norms of my inherited cultural tradition with the values of my adopted home in the west.

Although this experience puts me in the position of a 'free traveller' (Kim, 2010) between Arab Muslim culture and British society, I am nevertheless mindful that this very situation could lead to assumptions that may significantly bias the research. There is the potential of uncritically claiming 'insider' knowledge (Kim, 2010) of Muslim culture without considering the influence that my British education has on my perspective. I am also aware of the potential of 'projecting' my own assumptions and using these as a lens to view and understand the Co-inquirers' experiences (Berger, 2015).

I deployed four main strategies (Dinkins, 2005; Mauthner & Doucet, 2003; Morse et al., 2002) in an effort to moderate the effects of some of the issues outlined above and to ensure that fidelity to the Co-inquirers' own lived realities was maintained. These included: (a) keeping a reflexive journal in which I kept the question "which part of what's going here is my own "stuff" and which is that of the Co-inquirer's?" at the forefront of my mind; (b) regularly scheduled meetings with colleagues about issues relevant to these particular forms of personal bias; (c) as is required by the interview technique itself, checking-in with Co-inquirers (during the interviews) that any impressions formed or interpretations made are true to their experiences; and (d) recording an interview session that was later rated by the second supervisor in which subtle instances of potential concern could be identified (e.g. Asking leading questions, pre-empting answers before the Co-inquirer had time to formulate their own, etc.).

2.5.4 Data collection

Interviews with Co-inquirers 1 and 2 took place in my office, while Co-inquirer 3 was interviewed in his own place of work. Given this was a pilot run, the interview duration was set to only a rough time frame of between 1 hour and 1.5 hours. The first interview was recorded and presented to my supervisor to rate adherence to the Socratic method before proceeding to the other two interviews – which were also recorded but not rated.

2.5.4.1 Interview protocol

The interviews were all conducted in English with a protocol consisting of the following stages:

Welcome

The interview began with me welcoming the Co-inquirer and checking that they had read through the information sheet, welcome statement and signed the consent form (See Appendices 2,5,3).

Agenda setting

I shared the general outline of the different phases of the interview with an anticipated time frame with the Co-inquirer.

Main interview

I used the semi-structured SDI-v introduced above (see Appendix 7 for the interview schedule). Procedurally, the interview comprised two parts:

Part 1: Exploring personal history and core beliefs

First, I gathered information about the Co-inquirer's personal history and home atmosphere while growing up and at school. Then, proceeded to identify a typical situation in which the Co-inquirer experienced significant affect. I used this situation to 'downward arrow' to underlying beliefs about self, the world, others (including relationships) and the future.

Part 2: Exploring religious history and associated core beliefs

In part two, I asked the co-inquirer to reflect on their religious history with information elicited about family religiosity, early religious socialisation and internalised beliefs about God and other religious phenomena. I identified current religious beliefs before proceeding to downward arrow again to the nature of these religious beliefs and their relation to the co-inquirer's views of themselves, the world and others.

Feedback

Before formally ended the session, I invited the co-inquirers to give feedback on the interview through open general questions. I asked them to comment on their overall experience of being interviewed (using this style of interview) and recommendations for any changes they felt needed to be made to facilitate a better experience for future co-inquirers.

2.5.4.2 SDI-v rating scale

The Assessment of Core CBT Skills (ACCS) domain 9 was used to ensure adherence to the Socratic method and to guarantee (to the extent possible) that the interview style could reasonably claim to be a faithful application of such a method. This domain is not published in the original 2014 ACCS version (Muse et al., 2017); it was developed later by the Oxford Cognitive Therapy Centre (OCTC) and at the time of deploying it in this study was still being used by this centre to assess the fidelity of its therapists and trainees to the Socratic method (H. Kennerley, personal communication, December 2019). The rater of the audio tape is a highly experienced clinician, supervisor and a member of the team that originally developed the scale. The rating guidelines are shown in Table 1. Although other tools such as the Revised Cognitive Therapy Scale (CTS-R) (Blackburn et al., 2001) already exist and have enjoyed widespread use as CBT practitioner assessment tools, I felt that ACCS domain 9 should be used because (a) it specifically assesses the Socratic method rather than the general 'guided discovery' skills assessed in the CTS-R, (b) the assessor has expertise in using ACCS domain 9 and (c) the ACCS has greater psychometric robustness than the CTS-R (Muse et al., 2017).

Domain 9: Socratic method (in ACCS)

According to domain 9, functions of the Socratic method include the following:

1. **Explore and unpack an individual's experiences and identifying idiosyncratic 'meanings' (this was the function Socratic method was being used for in this study);**
2. Help patients widen their cognitive and behavioural horizons in order to shift unhelpful affect;
3. Help patients develop independence in learning and retaining relevant CBT skills and knowledge; and
4. **Promote a climate of shared responsibility and expertise.**

(Note: functions 1 and 4 (in bold) are directly relevant to this study).

Table 1 *Domain 9.1: appropriate use of Socratic method rating guideline*

Point scored	Classification	Description of classification
1	Limited	**Absence of skill** or an **inappropriate performance** Therapist made very little or no attempt to use Socratic methods. Instead, the therapist relied on didactic instruction, direct questioning and debate (e.g. therapist instructed, lectured or seemed to be arguing with the patient.
2	Basic	**Major substantive problems** in one or more of the following ● On a number of occasions, the therapist used direct questioning or didactic information-giving when Socratic methods would have been more productive (e.g. the therapist debated with or tried to persuade the patient) **or the** therapist over-used Socratic approaches when didactic instruction was more appropriate or when direct questioning was more efficient. ● Socratic approaches lacked focus and direction or did not allow time for reflection, and thus were unlikely to progress therapy (e.g. information gathering that had no clear purpose and did not contribute to a better understanding of the patient's problems or potential solutions or posing Socratic questions without allowing the patient the time needed to properly reflect on their response). ● Th therapist inappropriately used Socratic methods when didactic instruction was more appropriate (e.g. the patient did not have the knowledge to answer the questions asked) or when direct questioning was more efficient (e.g. in collecting simple demographic information or carrying out a risk assessment).
3	Good	**Good degree of skill** in the following areas, with only **minor problems or inconsistencies**: ● For most of the session, the therapist used an appropriate balance of Socratic methods, direct questions and didactic information-giving. However, Socratic approaches could have been used more broadly across all aspects of the session **or** there were one or two occasions when the therapist relied too heavily on Socratic approaches. ● Socratic methods were generally timed, focussed and directed in a way that was likely to progress therapy (e.g. providing useful insight or facilitating the patient's learning).
4	Advanced	**Consistently high level of skill** in the following areas: ● The therapist was consistently curious, timely and skilful in using a variety of Socratic methods across all aspects of the session to explore the patient's experiences and perspectives and to facilitate independent learning (e.g. the therapist engaged patient in curious debriefing of cognitive behavioural therapy interventions to help them develop new conclusions). ● The therapist refrained from using Socratic methods when direct questions or didactic instruction was more appropriate

Note: Socratic questioning skills are assessed in this domain along a four-point scale – with each point being designated a classification category and a definition.

2.6 Results

Although stated above, an important point needs to be reiterated here: the second author rated the audio recording with reference to ACCS domain 9 and was not aware of the subtle change in emphasis made as a result of incorporating the SHI-v skills. So, the comments reported below were initially included in the rating report as part of an overall ACCS feedback statement. In other words, the categorisations of that feedback text under the different headings of 'Socratic dialogical interpre-view skill' presented in Table 2 were made after completing the report and are presented in this form to demonstrate the presence of the skill by providing relevant evidence from the rater's reports.

2.6.1 ACCS domain 9 audio rating

Before the first aim of testing the utility of the SDI-v as a research tool could be performed, the consistent use of relevant SDI-v skills in the interview needed to be established. The rater's overall score for evidence of Socratic skills as assessed by the ACCS domain 9 was **3** to '**high 3**', which translates to a 'good degree of skill … with only minor problems or inconsistencies' (see table 1). Table 2 presents the rater's comments.

Table 2 *Rater comments retrieved from (ACCS) domain 9 feedback report*

Overall score (category): 3 to high 3	
Rater's coverall comment *Well done, I'd put this in the 3 category (High 3 actually) You have a good range of Socratic skills e.g.: Nice picking up on emotion active in the session, quantifying beliefs, working towards core beliefs, using imagery to enhance affect etc. You can congratulate yourself on your essential skills, particularly embedding the process within a warm, accepting relationship*	
Socratic Dialogical Interpre-view skill	**Rater's comment (showing evidence for presence of skill)**
Identifying and clarifying cognition (Eliciting cognitions, defining terms Using analogies, using examples; using images)	*Great to bring her back to an image of the key event. Nice unpacking of meanings – systematic and sensitive*
Identifying affect associated with hot cognitions (Targeting emotion associated with 'hot' cognitions)	*You were conscientious in exploring P's discomfort about feeling privileged while mother "has nothing"…. Good systematic unpacking of affect*
Downward arrowing (Drilling into deeper beliefs and underlying meanings)	*[I] liked the way you tried to address this from different angles because she struggled with the standard downward arrow'*
Intrepre-viewing (Validating interpretation)	*It was also clear that you were open to be corrected by P and again this is fundamental to good Socratic method*
The hermeneutic circle (Starting a new cycle of questions)	*You segued very elegantly from one topic to another, and this created a conversational flow – again very well done. The shift from questions around family to questions about religion seems to work well...*
Common factor skills (e.g., empathy warmth, genuineness, curiosity etc.)	*Excellent setting of scene. Soc[ratic] method is used in a context, and it is important to create a context that maximises getting the most out of the technique. I think you achieved this well – you informed your client of the purpose and structure of the session, asked how she felt, set in place a strategy for her taking charge if she didn't feel safe. Whenever you asked about personal information you checked that this was ok. All good work.* *'You communicated interest and respect – I think this helped her to open up, as did your warmth and openness. You balance warmth and openness with professionalism.*
Summary of areas of improvement – *Beware filling the gaps and risking leading your subject's answers (you raised this yourself)* – *Rein in discussions so that they are not too repetitive or discursive*	

2.6.2 Interview extracts demonstrating aspects of the SDI-v skills

The second objective towards meeting the first aim was to determine whether the resulting interview data contained evidence of underlying theocentric beliefs and assumptions. Table 3 displays examples of important underlying beliefs and excerpts from the interview transcript that demonstrate these.

Table 3 *Types of core beliefs and demonstrative examples*

Type of beliefs	Data extract demonstrating possible core beliefs and underlying assumptions/rules of living
Core beliefs about God	**Interviewer:** *…you brought up an important thing about heaven and hell and punishment and judgement and so on…. I've never asked people this …* [both laugh] *thank you for exploring this with me. Because this is new territory for me as well. So, in terms of judgement by God… in terms of what one should do and what one shouldn't do, what sense of God did you have in relation to these things…. you mentioned God is there watching us, what sense of 'watching us' do you have of God?* **Co-inquirer 1:** *I think God is much more understanding than we* [Muslims]*, you know, picture him. You know I think God is very understanding of our nature, you know. He made us, He knows … the challenges we face and everything. So, I don't find this picture that 'we're going to be, like, you know burnt in hell…' is the way we* [Muslims] *think it is.* **Interviewer:** *Okay, so, your belief about God is as you said He's an 'understanding' being by nature* **Co-inquirer 1:** *Yes!*
Core beliefs about self	**Interviewer:** *… What aspects of God do you hang on to that allow you to have the beliefs that you have, and allow you to access the sources of strength that you do access?* **Co-inquirer 2:** *The 'All-knowing'* [aspect]. **Interviewer***: The All-knowing part, mhm. So, it sounds to me like for you there's a strong sense of comfort and strength derived from your belief in God, OK. How do you think God sees <u>you</u>?* **Co-inquirer 2:** *Really sad to tell! cause as a human being I know I'm not perfect, yeah, so … I always ask for forgiveness when I go wrong.* **Interviewer:** *So do you believe he sees you as a bit sinful?* **Co-inquirer 2:** [Pause] *I try, I try my best not to.* **Interviewer:** *Sure, I'm sure you do.* **Co-inquirer 2:** *I do,* [subdued voice] *but as a human being, as I've said, I cannot be perfect.*
Core beliefs about others	**Interviewer:** *What do you believe about others?* **Co-inquirer 1**: *Some things I'm not sure about. But I have this feeling that it can't be that bad* [co-inquirer laughs]*, you know…and I can't, and I don't, I never have this, you know, I can't understand that God just made us all to just take us 'Muslims' and put them in heaven and put all the other people in hell, just because they don't pray the same way; or just because they don't fast in Ramadan. Because I think other people might be doing, for humanity much much more things than someone who goes and prays five times a day…you know and this can't be just taken lightly, or for granted, I'm sure God has a plan for these people, you know [PI: right right]* **Interviewer:** *And these are your current beliefs in terms of how God sees human beings?* **Co-inquirer 1**: *Yes exactly, and I think that's the most important thing*
Core beliefs about the world	**Interviewer:** [after a series of questions] *… And how does God see the world in your view?* **Co-inquirer 2:** *… He is pleased with the believers and he's not pleased with the disbelievers.*
Underlying assumptions/rules of living	[Client reported earlier on in the conversation that it felt as if he'd been stabbed in the heart when he heard of his father's death] **Interviewer***: So, when you were first 'stabbed in the heart', that was the first thought that went through your mind?* ***Co-inquirer* 3***: The first thought I said, inna lilLahi wa inna ilaHi raji'oon* [We belong to God and to Him we shall return]*, I didn't say any other words; and this is what we usually believe in; and I said that we all came here to this world by God and to him we belong, and this is exactly what I believe in, that no matter what happens –* **Interviewer***: And again, I'm just wondering, had you expressed grief and had you expressed devastation at the loss … would that have been a bad thing?* **Co-inquirer 3***: Now, there is a difference between expressing or understanding.* **Interviewer***: OK, let's talk about expressing.* **Co-inquirer 3***: Yeah, expressing, I could, for example, as a person just go or shout or crush things or walk in the streets or whatever, but to me that wouldn't be the solution because there is no place for it, there's no grounds for that action.* **Interviewer***: What about simply expressing, real, deep, heartfelt grief at the loss…?* **Co-inquirer 3***: Now, of course, the crying was one of it*

	Interviewer*: Is that OK* [the crying]*?* **Co-inquirer 3***: Yeah, absolutely, … we are human and it's our nature and so, of course. I think I've never cried in my life like that -* **Interviewer***: Ahhh! Ok!* **Co-inquirer 3***: … I'm a person that usually never cries. I don't think any person before in my life saw my tears unless I was a kid, since I was maybe six or seven years old... it was a <u>shame</u> for me to cry, I'm a man I need to* [not cry]. **Interviewer***: So, I'm a man, I mustn't cry?* **Co-inquirer 3:** *Yeah.*

2.6.3 Co-inquirer feedback on the interview experience

The second aim of the pilot was to determine whether asking questions in this Socratic style was culturally acceptable to the co-inquirers. Table 4 includes direct quotations from all three co-inquirers regarding their interview experiences.

Table 4 *Interview feedback questions and co-inquirers' responses*

Feedback question	Co-inquirer and feedback comment
Question 1 What was the experience of participating in this interview like for you?	***<u>Co-inquirer 1</u>*** **Co-inquirer:** *It was a good experience, and nothing bothered me*
	<u>Co-inquirer 2</u> **Co-inquirer:** *I would say you tried your best to simplify the questions, and you have asked the questions in the kindest way possible…. Because otherwise if it wasn't then I wouldn't have been able to open up… Because in our life we rarely talk about our lives and opening up to strangers, I would say.* **Interviewer:** *Indeed, and I appreciate that.* **Co-inquirer:** *But you have asked the questions and have pushed me to give you more and more.* **Interviewer**: *And was that OK, to have pushed you?* **Co-inquirer:** *Yeah, it was. It was because … I would say my English is not good, not the best.* **Interviewer**: *It* [your English] *was great, I understood everything.* **Co-inquirer**: *But you tried to simplify everything for me.*
	<u>Co-inquirer 3</u> *That was a great interview, and I really liked the order of the questions because I feel it's very oriented in a good way, and especially it's really helped me in a few points that I would find it more clearly when I go through, for example, discussions or in conversations with people from different beliefs….*
Question 2 Is there anything I could've done differently to improve the interview experience for you?	***<u>Co-inquirer 1</u>*** **Co-inquirer:** *No, I think it really made sense you know? the sequence … how we started things and then … relating it to religion. It wasn't anything, like, too … too much for me … I was fine talking with it and why we talked about it all.* **Interviewer:** *What about the bits where we tackled some of the emotional stuff, was that … okay? The depth into which we went...?* **Co-inquirer:** *It was* [all] *totally fine for me*
	<u>Co-inquirer 2</u> **Co-inquirer:** *Not to me, because I have never been involved in anything of this kind so it being my first time … I think this has not been bad. The way you have been asking me the questions … it has not been bad, otherwise, I wouldn't have been able to open up … I think you just need to keep it up!*
	<u>Co-inquirer 3</u> **Co-inquirer** *I wouldn't actually ask you to do anything differently, according to the order of the questions, it's just perfect. But I would maybe have some questions about comparing people's belief, like go deeply and comparing from people's knowledge, different beliefs together and see what results.* **Interviewer**: *Yeah, that's right, I'm doing it with different individuals.* **Co-inquirer:** *Ah, different individuals are different?* **Interviewer**: *Yeah.* **Co-inquirer**: *So, you see, you're doing that as well.*

2.7 Discussion

This study set out to pre-test a new interview method called the SDI-v, which was developed through a synthesis of the Socratic method used in CBT and a research interview technique pioneered by Dinkins (2005). The SDI-v was tested for fidelity to the Socratic method in general so that any claims for using Socratic dialogue as a questioning style could be justified. The resulting interview data were also examined for evidence of theocentric beliefs and underlying assumptions. These beliefs constitute the core focus of the overall inquiry. Finally, an assessment of the degree to which SDI-v was culturally acceptable was carried out. This was deemed necessary given that the subject of investigation centres around highly delicate personal beliefs about God and other religious phenomena.

Overall, the SDI-v had good fidelity to Socratic method (as measured by the ACCS) and meaningful theocentric and religio-centric beliefs and assumptions were elicited within culturally acceptable boundaries. Below is a discussion on adaptations made to the interview schedule and an outline of the main lessons learned.

2.7.1 Reflections on applying the SDI-v

The interview format and delivery went through several minor iterations as a result of learning gained from each co-inquirer. These changes were mainly in the form of subtle shifts in emphases, the time spent on different aspects of the interview and questioning style, and exploration of different wordings to elicit the information sought.

Reflections on Interview 1

Co-inquirer 1 was an eloquent 'psychologically minded' woman who was insightful, open and generous in her answers. This was very helpful given that she was the first co-inquirer to be interviewed and when it was not clear at that stage how this new interview technique would be received, especially considering the previous literature on the applicability of the Socratic method to non-western samples (e.g. Naeem et al., 2019). Her response to each question – with sufficient depth, but within an appropriate time frame – allowed me to apply the SDI-v relatively effectively. I was able to handle the occasions when she did express difficult emotions with a combination of empathic acknowledgment of her distress, giving her ample time to process these emotions, and when it felt right, moving on to the next topic without inappropriately 'over-dwelling' on affect. So, the overall structure of the session, the interview format, the management of difficult affect and the downward arrowing technique all seemed to work well. Importantly, I also managed to use the downward arrowing technique to explore deeper beliefs about her relationship with God and how she believed He saw her.

However, as feedback from the ACCS highlights, there were also minor issues with the application of certain Socratic questioning skills and aspects of the interview schedule. These included my tendency to ask leading questions at times or to pre-empt the co-inquirer's answer by completing sentences for her and/or filling-in silence gaps. This occurred on more than one occasion and may obviously have influenced the co-inquirer's answers in a certain direction. I was conscious of the fact that I was completing replies for the co-inquirer sometimes and justified this with the thought that English was not her first language. So, to save her the embarrassment of 'making a mistake' (poor English is considered embarrassing in this culture as it is perceived as a sign of poor education), I would suggest words or phrases to her. In hindsight though, while this may have been understandable, on balance, allowing the co-inquirer to find her own words would have given her answers more validity.

The other issue emerging from the first interview was the often-unnecessary repetition of discussion points and the discursive nature of aspects of the conversation. Reining this in would have allowed for more time to explore new topics rather than dwelling on areas that had already been covered.

Finally, the first interview allowed me to realise that I spent more time exploring the respondent's childhood than was necessary. While getting a sense of her early upbringing was an essential part of the interview, not least to gain a sense of which later adult beliefs about the divine may have childhood origins, during this interview, I spent much time simply investigating the co-inquirer's childhood experiences per se and not on exploring her 'religious' childhood experiences as such. Perhaps my background as a clinician led me into that role and I was not as present as a 'researcher' as I could have been at times.

Reflections on Interview 2

Co-inquirer 2 was equally generous with her time and insights. She worked hard during the interview to try to give the answers she thought were being sought but was also courageous enough to ask for clarifications when the questions were not lucid enough. I incorporated aspects I had learned from the first interview into this session: I took care not to fill in silence gaps with suggestions for answers or to ask leading question.

Although I took care not to spend too much time on a simple narrative of childhood personal history (unless this was related to early childhood religious experience), because of the complexity of this co-inquirer's early experiences, it was in fact necessary to do precisely that. The co-inquirer disclosed experiences of significant loss during early childhood that she felt were important for her to talk about. Given the choice between pursuing my research agenda and allowing the co-inquirer space to talk

about issues that were obviously important to her, I took the decision to allow her the time she needed to express her feelings. This led to a longer interview.

The other learning point from this interview (which was a common theme with the subsequent interview) was the relative difficulty in using the classic downward arrowing technique – especially with regard to eliciting core beliefs about 'self'. It is unclear whether in collectivist societies core beliefs about an individuated self are not customarily expressed or whether it was skill in the application of the downward arrowing technique that was lacking. In any case, there was difficulty in eliciting personal core beliefs. However, during the process I did discover something that proved to be very useful in working with both this and subsequent co-inquirers who struggled with identifying personal core beliefs. This was to ask the question "assuming it is "your fault" (or whatever happens to be the negative surface belief), how do you think God sees you as a result?"; "having done that, how do you think God sees you?"; and ultimately "how does God see you now?". This theocentric approach for religious individuals seemed to yield both meaningful core beliefs about self and circumvented the struggle of having to persist unfruitfully at identifying personal core beliefs following the classic 'vertical arrowing' technique. This 'horizontal arrowing' technique ('horizontal' because it shifts horizontally, at the same depth, between personal and theocentric beliefs) seemed to work better. but only when I had achieved sufficient depth into the co-inquirer's inner beliefs system (schema) with the proceeding questions (evidenced by an obvious change in affect either through physical or more subtle cues).

Reflections on Interview 3

Co-inquirer 3 presented the most interesting challenges in terms of the feelings invoked in myself and the difficulty experienced in applying some of the technical interview skills – particularly when attempting to elicit the co-inquirer's personal religious beliefs and feelings. I realised later that the frustrations invoked in me were due to repeated failures on my part at eliciting the co-inquirer's own personal feelings about his relationship to religious belief. Co-inquirer 3 felt more comfortable relating the 'official' doctrinal lines on the religious issues discussed than sharing his personal beliefs and feelings – a tendency Barrett (1999) calls 'theological correctness'. Despite numerous attempts at asking questions about his 'personal' sense of how God saw him, for example, he would regularly revert to quoting scripture or citing other religious texts regarding God's view of humanity in general. I tried to ask the same questions in different ways but to no avail. In the end I decided to explicitly share my thoughts with the co-inquirer about how he was approaching his answers to these particular sets of questions and credit to him, he responded positively, and a more fruitful discussion ensued.

A learning point brought to this session from the first interview was that with sufficient sensitivity, unnecessary discussion could be reined in and refocussed in a more productive direction thus achieving more effective 'pacing' (Blackburn et al., 2001) without seeming to offend the co-inquirer. Finally, the use of 'horizontal arrowing' mentioned above seemed to work well with this co-inquirer too, and provided a useful strategy for accessing core beliefs through questions about beliefs about God's perception of self. Another important consideration in using this theocentric horizontal arrowing technique effectively is the obvious point that God's perception of self needs to be important to the co-inquirer – more important than the co-inquirer's own perception of themselves sometimes (as articulated by the co-inquirers themselves). However, interestingly even the apparently less religious co-inquirer 1 became visibly emotional when asked what she thought God thought of her. I used this expression of affect to drill down to beliefs about self.

Reflections on issues common to all three interviews

Other important lessons learned from this study include: (a) when using an incident analysis as an entry point to deeper core beliefs, it is more advantageous to obtain a 'typical' emotionally significant incident rather than to ask for a 'recent' emotionally salient situation (unless the recent situation is also one that excites a 'typical' strong emotion). (b) when externally triggered/focussed emotions are expressed (e.g. Anger or fear), downward arrowing to others and the world proved to be a more useful line of inquiry in the first instance. When internally triggered/focussed emotions (e.g. Sadness, guilt) are expressed, however, downward arrowing to core beliefs about self yielded better results. (c) initially, I employed an adaption of a phrase Lee and James (2012) use in their compassion-focussed therapy. Instead of "how you think you live in other people's minds?", I used the phrase: "how do you think you in live in the mind of God?" the co-inquirers reported that this phrase was inappropriate and may even be religiously offensive. They advised using 'how do you think God sees you?' instead.

2.7.2 Reflections on the cultural aspects of the study

Previous research suggests that the Socratic method may not work as well with non-western populations without "sufficient preparation" (e.g. Naeem et al., 2019, p. 392). The learning gained from this study only partially support this view. As stated above, I experienced some difficulty in using vertical arrowing at times but with some adjustments (i.e. Once eliciting a hot belief, then asking: assuming that belief to be true, what would God think of you?), it was possible to identify presumed core beliefs quite successfully. There seems to be a misconception regarding the appropriate application of Socratic questioning in clinical practice with the tendency by some to insist on proceeding with this questioning approach regardless of the client's ability to answer the question. Good Socratic inquiry, kennerley et al. (2017) suggest, incorporates the ability to appropriately decide

when to proceed with further questions because the client is able to answer these, and when to offer more didactic statements or present concrete examples to help the client gain a sense of what is being sought. Using this discerning approach with the co-inquirers in this study was effective and produced useful data.

In terms of cultural acceptability, all three co-inquirers explicitly stated that they found the experience of being interviewed agreeable and, off the record, even commented that they enjoyed it. However, to what extent my embeddedness in the culture of the co-inquirers facilitated the cultural appropriateness of the interview process is an open question. Being of Arab and Muslim heritage myself seemed to facilitate the manner in which I asked the questions, how far to push for difficult answers and how to sometimes even challenge responses (as was the case with co-inquirer 3). The question arises to what extent a non-Muslim interviewer could in fact challenge responses in this way without meeting resistance. Moreover, all the implicit knowledge of non-verbal cues that come from being steeped in the tradition of the co-inquirers may have also contributed to putting the co-inquirers at ease and aiding the flow of the conversation and openness to inquiry. This may have been helped further by the fact that I, while a Muslim, am also a 'Westerner', which means that, as well as seeming sympathetic to the co-inquirer's spiritual tradition, I had enough cultural distance from the co-inquirers for them to feel comfortable expressing more controversial opinions without 'fear of being judged' (as co-inquirer 1 disclosed post interview).

An interesting phenomenon observed during the interview was the incongruence between what co-inquirer 2 and 3 said about attributes of God and how they believed God perceived all 'non-Muslims'. When asked about salient qualities of God, they both expressed a belief in an 'all-merciful', 'all-forgiving' Being; yet when queried as to how they thought God saw others, they both stated that they believed 'others' (non-Muslims) were 'unsaved'. This inconsistency between the all-encompassing compassionate nature of God and his perceived judgement of non-Muslims may have a deeper cultural implication rather than justifiable religious roots (Nakata, 2006). The distinction between what was religious and what constituted cultural inheritance was a difficult question to grapple with throughout the pilot study, and it must be stated that no attempts to answer this question were made nor can such matters be resolved within the confines of such a study. Therefore, I assumed that anything that had an explicitly religious theme was at least partially religious and left the issue of finer distinctions unexplored.

2.7.3 Methodological limitations

Although pilot studies are invaluable for testing the feasibility of larger studies and trialling the acceptability of new research tools in new cultural contexts (Kim, 2010), they also come with inherent limitations. Chief among these is the often-limited sample size. This issue was present in the current study too. Using data from only three co-inquirers places serious constraints on the generalisability of the findings (Leon et al., 2011). Furthermore, in the present study, given the fact that none of the participants were GCC nationals, their responses to the SDI-v may differ from how co-inquirers from the Gulf region would react. There was a rationale for recruiting a small sample size at this stage which will be discussed below.

However, before delving into that, it is worth first of all expanding on other sampling methodology issues and potential biases. As reported above the sampling methods employed in this study were convenience (Etikan et al., 2016) and snowballing sampling (Valerio et al., 2016). While these methods were chosen due to the perceived sensitivity of the topic under investigation, and to utilise trust presumed to be already existent between co-inquirers and those recruiting them, the technique comes with inherent biases that must be acknowledged. First, the convenience sampling technique is a non-probability method which inherently precludes generalisability due to lack of random selection (Etikan et al., 2016). It also contains selection bias precisely due to the fact that individuals were chosen by myself based on their accessibility to me and on what I perceived maybe certain qualities. This method could have impacted the validity of the overall thesis findings (Bryman, 2016) had the second study (reported in the next chapter) not been carried out. Secondly, the snowball sampling method involved soliciting members of my social and professional network to identify and recruit suitably qualified participants. While this approach was effective for reaching co-inquirers who might otherwise have been difficult to access, and ensuring recruitment of suitable individuals, it introduced limitations in terms of diversity. The inherent nature of snowball sampling meant that the recruited co-inquirers often shared similar characteristics and perspectives with their recruiters (Noy, 2008). In the context of the current study, this limitation in variability alongside the small sample size constrained the diversity of the Muslim community represented in the study.

However, there were important methodological and ethical considerations for the employment of the non-probability sampling methods discussed above and the constraints placed on the sample size. The most important of these is the relative sensitivity of the subject matter being discussed. My supervisor and I recognized the need for caution when posing probing questions about potential misinterpretations of religious beliefs, given the immense respect with which religion is held in this part of the world. Consequently, we decided to limit the sample size, hoping to minimize the exposure

of co-inquirers to any potential emotional distress. This approach also allowed us to selectively recruit participants who we believed were likely to be more comfortable and capable of addressing such sensitive topics.

In any case, in order to mitigate the sampling biases identified above a number of strategies were employed. First, every effort was made to ensure that the three participants represented a diverse range of opinion. One participant was a religious female who was not Arab and came from a non-Arab country where Muslims were a minority. Another participant was an Arab Muslim female who was not overtly observant and a third was a religious Muslim Arab male. Second, my own positionality and potential biases were continuously reflected upon, as outlined in section 2.5.3. This reflexive practice helped in recognizing and addressing biases in the selection and interaction with co-inquirers (Berger, 2015). Finally, by identifying and acknowledging the methods used and their limitations in this research, the hope is that the transparency of the study is further enhance. This approach allows readers to critically evaluate the findings within the context of these constraints, fostering a more nuanced appreciation of the study's implications (Morrow, 2005)

2.8 Final comment

Overall, the experience of conducting this pilot study proved to be very valuable. Testing the interview style and approach on Muslim co-inquirers yielded vital information on how to better deliver questions and to structure the schedule more effectively, and it gave me confidence that the type of data sought for the main study are extractable using this method. Finally, and perhaps equally important, is the sense of reassurance gained that a Socratic style is appropriate even when exploring emotive religious topics in a relatively traditional culture. I was initially concerned that such a seemingly probing method may not be welcomed by the target population and may even cause offence. In hindsight, however, the co-inquirers proved to be a lot more willing to share their beliefs than I originally anticipated. This was perhaps partly due to my very careful and considered delivery of Socratic questioning and the co-inquirer-centred atmosphere created, but more significantly spoke of the co-inquirers' openness and generosity of spirit.

CHAPTER 3: Mapping the Cognitive Representations of Religious Beliefs: A Schema-Based Approach

3.1 Introduction

As detailed in Chapter One, the utility of conceptualising religious beliefs as schemata was advocated by a number of early researchers (Bjorck, 1995; Koenig, 1995; Lau, 1989; Mcintosh, 1995; Paloutzian & Smith, 1995). Using the schema construct as a conceptual framework but within faith development theory (Fowler, 1981), Streib et al. (2010) later operationalised the construct through the Religious Schema Scale (RSS). Although psychometrically robust within Western contexts, and exhibiting basic structural applicability across cultures, the RSS encounters significant limitations when assessing the interrelations among its various subscales within different cultural settings (Ghorbani et al., 2016; Kamble et al., 2014; Tekke et al., 2015). This suggests that while the schema approach to religious beliefs is broadly applicable, the content and dynamics of these schemata may differ cross-culturally.

This study employs a particular model of schema – one based on the CBP and specifically the work of Young (1990, 1999); Young et al., (2003, 2006) and Williams (1997). The model was described in detail in chapter one, section 1.2.3.4 In summary however, the model proposes that emotional distress is largely mediated by dysfunctional cognitive schemata (Beck, 1967, 1976; Riso & McBride, 2007) that usually develop early in childhood. While Young et al., (2003, 2006) emphasise the maladaptive aspect in their conception of childhood schemata, this study adapts their definition by omitting the element of dysfunctionality and adds more elaborations borrowed from Williams (1997). The religious schema construct, as operationalized here, comprises broad, pervasive themes used as templates for guiding cognitive processing. These templates are developed during childhood and reinforced throughout life. They contain memories, emotions, and cognitions that drive behaviour and are modular in nature (where activation of one component triggers the entire system). As stated, this definition integrates elements from both Young et al. (2006) and Williams (1997), offering a useful conceptual framework for examining religious beliefs and their link to emotional experiences (see chapter one, section 1.2.3.4 for the detailed definition).

Although schemata remain stable at core they can undergo change across the lifespan (Piaget, 1976). According Fowler's (1981, 2001) influential faith developmental theory, beliefs of individuals can evolve over time. Fowler includes seven stages of faith development in his theory. However, for the purposes of this study these stages have been summarise into the most relevant ones. Specifically, during early childhood (Intuitive-projective stage) faith is experienced and develops through encounters with symbols (e.g., in the forms of stories and images) and is influenced by others. Here a more intuitive sense of morality prevails and a naïve understanding of how God created the world and causes the universe to function is held. During this stage wild or destructive images (in reality or dreams) can terrify the child (Parker, 2011).

In middle childhood (mythic-Literal stage) religious teachings are taken at face value and symbols have deeper but only one-dimensional meaning to them. During this stage narrative is used to give coherence to one's world but the challenge of moral literalness makes nuances in moral judgement difficult to comprehend (Parker, 2011). Another challenge here is reconciling conflicting ideas from different sociocultural sources (Roehlkepartain et al., 2006) (e.g., mixing with the opposite gender as a sign of modernity and progress versus perceived religious injunction against doing so).

Young adolescence (synthetic -conventional stages) is marked by a commitment to a particular religious belief system thus forming a clear religious identity (Parker, 2011). Being acutely aware of what others think is a key feature of this stage which makes youth vulnerable, and highly sensitive, to others' judgement of them (Parker, 2011). Faith is also located in respected leaders and authority figures (Parker, 2010). The type of faith adhered to at this stage, once commitment is made, is a more conformist than a critically examined one (Roehlkepartain et al., 2006).

The more reflective and deeper meaning aspects of faith are achieved in the later stages (individuative-reflective and conjunctive stages). Here an individual is able to critically reflect on self and own world view and later even participate in the deepest meaning of their faith while recognising the limitations of their understanding. This rarely achieved stage is also marked by a spiritual growth that accepts the truth of multiple manifestations of faith (Parker, 2011).

3.2 Aims of the Study

Although the investigation into religious schema does follow a developmental trajectory, this is not the primary aim of the study (even if this may provide interesting secondary data). Rather, this is a strategy adopted in order determine if any potential schemata identified have childhood origins and are reinforced throughout life, thus fulfilling one of the criteria for the religious schema model used in this thesis and defined in chapter one, section 1.2.3.4.

The primary aim of this study instead is to expand upon prior research that utilizes the schema construct to understand religious beliefs by focussing specifically on conservative Muslim individuals. It does so using the cognitive schema model of Young et al. (2003, 2006), with, as mentioned above, elaborations from (Williams, 1997), do so. The questions driving this investigation are therefore twofold:

Research questions

1. Do cognitive structures that satisfy the definition of religious schemata given in chapter one, section 1.2.3.4 and summarised above exist within the current study sample?
2. If so, what are the critical features of these schemata?

3.3 Method

3.3.1 Design

The current qualitative study utilizes a theory-driven deductive approach to both data collection and subsequent analysis. Individual in-depth interviews with university students who self-identified as Muslim were conducted to gather data, and template analysis (Brooks et al., 2015) was applied to analyse these data. Qualitative research not only allows for the development of deeper insights into the phenomena under investigation but also provides an appropriate framework for exploring potentially sensitive issues (Fahie, 2014), both of these factors were important to this study. An explicitly theoretical approach to data collection and analysis was used because it allowed for focus on pertinent aspects of the data rather than require the provision of a comprehensive account of all the information gathered (Braun & Clarke, 2006). Using this method also facilitated understanding of the data from a CBP informed schema model, the model within which this study is situated.

Epistemologically, this study approaches the subject matter from a subtle realist position (Hammersley, 1992; cited in McCluskey et al., 2011). While acknowledging that there exists an objective reality outside of, and knowable to the inquirer(s), this method nevertheless maintains that research focus and the conclusions drawn from it are not entirely independent of the perspectives and biases of the researcher(s) conducting the research (McCluskey et al., 2011). In other words, inquiry does not *reproduce* phenomena or even capture their essence, but rather only provide answers to the questions posed to them (Hammersley, 1992). This perspective provides the epistemological background of the initial investigation and informs the subsequent reporting style of the findings.

3.3.2 Researcher Description

I, the interviewer, am a Muslim whose conservative religious upbringing closely mirrors that of the interview participants (hereafter referred to as co-inquirers). However, even though I was born in an Arab Muslim country, I was raised and educated in the UK. Furthermore, prior to the interviews, I did have a previous professional relationship with some of the co-inquirers in my capacity as an ex-university lecturer of theirs (although none of the co-inquirers were my students at the time of the study). I was also an experienced and BABCP (British Association of Behavioural and Cognitive

Psychotherapies) accredited behavioural and cognitive psychotherapist therapist at the time of the interviews.

Given the sensitivity of the subject matter under investigation, my background contributed to allowing the co-inquirers to feel more at ease, knowing that they were speaking to someone who understood their religious tradition from the inside (Abbas, 2010). However, I was also awareness that because of this embeddedness (Levitt et al., 2018) co-inquirers may have been reluctant to share what might be perceived as theologically incorrect thoughts and feelings. This proved not to be the case evidenced by the nature of the material shared by the participants and their post-interview feedback.

Moreover, the prior lecturer-student relationship between myself and some of the co-inquirers facilitated the data gathering process by shortening the time it took to build rapport and created an evidently trusting environment. Again, this was highlighted in the co-inquirers' feedback. Finally, my extensive experience as a psychotherapist was an asset in helping to contain any emotional discomfort experienced by some of the co-inquirers during the interview and in ensuring that all co-inquirers exited the interview in a state comparable to the one they entered it in.

3.3.3 Recruitment of Co-Inquirers

Purposeful criterion-based sampling (Palinkas et al., 2015), employing a snowballing strategy was used to identify and recruit adult Muslim participants who were either Gulf Cooperation Council (GCC) state nationals (the sample contained individuals from the United Arab Emirates, Saudi Arabia, and Kuwait) and were currently living in the region, or non-GCC nationals who had been living in the Gulf region since early childhood, or GCC nationals who were living abroad temporarily as adults (e.g., as students). The reason for these criteria was to ensure that participants were culturally indigenous to this region, especially in relation to religious beliefs and attitudes.

Given the strong cultural homogeneity in the study population (Abdulla, 2016) and following discussions with an experienced researcher in the region, a figure of fifteen to twenty participants was considered optimal. I approached university lecturers and students describing the aims of the study to them and inviting participation in the research. I also specified the inclusion criteria and requested potential co-inquirers to share the information with others. Of those who volunteered, a pool of 18 participants described below was selected. After meeting the volunteers individually (face-to-face) for an initial conversation, where information about the study was shared and inclusion criteria checked, co-inquirers were provided with written information about the study and a consent form (see

Appendices 2 and 3) for them to read at their leisure and sign if they agreed to participate in the study. All 18 participants returned signed consent forms prior to taking part in the interviews.

3.3.4 Co-Inquirers

Eighteen co-inquirers were originally recruited; however, one withdrew consent during the data analysis stage of the study, and another's recording was digitally corrupted (i.e., it could not be transcribed, and he was not available for a second interview). As well as age and connection to the Gulf region, a range of other demographic data from the sixteen remaining participants was also collected. These included gender, religiosity, socioeconomic status, history of current mental health problems, family support, and living arrangements (Table 5).

The mean age of the sample was 24 years old (ranging from 18 to 38 years; SD= 5.37). A good representation of both sexes (only two designations for sex are legally recognised in the Gulf) was achieved with ten females and six males. Nine participants described themselves as religious, five as non-religious (non-religious is defined here as non-practicing rather than non-believing) and two declined to answer. Family religiosity was also recorded. In terms of socioeconomic status, one person described themselves as belonging to the upper class, five people regarded themselves as upper middle class, eight as middle class, and one as lower middle-class. Eleven participants denied having mental health problems while four admitted to having a diagnosed of a mental disorder. All but one of the participants stated that they have had good family support while growing up. As is typical of people in the region the majority of the participants were living with their parents (11 in total), with four living alone, and one living with her children (Table 5 contains additional demographic information; and Appendix 6 demographic data collection forms).

3.3.5 Data Collection

Co-inquirers were all interviewed by me in a private room in a university setting. All interviews were recorded. Some co-inquirers provided consent for video recordings while others only agreed to an audio recording. Given that I was a licenced clinician with many years' experiences as a CBT therapist, and under the supervision of a consultant clinical psychologist from the OCTC, it was deemed appropriate for me to conduct these interviews (exploring potentially delicate issues).

The interview method implemented could be classified as semi-structured. However, in terms of question delivery and information gathering style, as described previously, the interview technique adopted a synthesis of what Dinkins (2005) refers to as "Socratic-hermeneutic interpre-viewing" (SHI-v) and the Socratic method commonly used in CBT. Essentially, SHI-v is a method of interviewing where

a researcher and co-inquirer (Dinkins, 2005) engage in a dialogue (initiated by the researcher who assumes no prior knowledge), and through questions and responses, both researcher and co-inquirer are encouraged to reflect together on the concepts emerging within the interview (Dinkins, 2005).

Table 5 *Co-inquirer Characteristics (Excluding Withdrawn Participant)*

	Participants	
	Mean	**SD**
Age (n = 16)	24	5.37
	n	**%**
Sex (n = 16)		
- Female	10	62.5.
- Male	6	37.5
Nationality (n = 16)		
- GCC	12	75
- Non-GCC	1	6.3
- Mixed	3	18.7
Religiosity (n = 16)		
- Religious	9	56.3
- Non-religious	5	31.3
- Decline to answer	2	12.4
Socio-Economic status (n = 15)		
- Upper class	1	6.7
- Upper middle class	5	33.3
- Middle class	8	53.3
- Lower middle class	1	6.7
1st Language (n = 16)		
- Arabic	12	75
- Other	3	18.8
- Bilingual	1	6.2
Supportive family (n = 16)		
- Yes	15	93.8
- No	1	6.2
Marital status (n = 14)		
- Single	12	85.7
- Married	0	0
- Divorced	2	14.3
Mental health problems (n = 15)		
- Denied	11	73.3
- Yes	4	26.7
Living situation (n = 16)		
- with parents	11	68.8
- alone	4	25
- with own children	1	6.2
Marital status of parents (n = 15)		
- Married	10	66.7
- Divorce	4	26.7
- Deceased parent	1	6.6
Family religiosity (n = 16)		
- Religious	13	81.3
- Not religious	3	18.7

n = 16 unless otherwise stated (total ns < 16 indicate missing data).

This curious and collaborative approach to interviewing is imbedded within the Socratic method used in CBT (Kennerley et al., 2017), hence the compatibility of the two techniques. However, while SHI-v is

explicitly designed as a research tool, the CBT Socratic method was developed within a therapeutic context and therefore incorporates within it a useful set of common factor techniques (Browne et al., 2021). These techniques help contain potential emotional discomfort while at the same time allowing for deeper explorations of emotive material. This new synthetic style of interview is referred to as the Socratic dialogical interpre-view (SDI-v). (see chapter 2 for more details).

The 1- to 1.5-hour-long interviews began with introductions and a check-in with participants. Then, an overall agenda for the rest of the interview was explicitly stated and shared. Initially, the conversation focussed on the interviewees' personal and religious experiences across the lifespan. The reason for structuring the interview along developmental milestones was to be able to determine if criterion 3 and 4 for the schema construct detailed in chapter 1 section 1.2.3.4 (p. 33) are met. These criteria stipulate that a schema develops during childhood and is reinforced throughout an individual's life.

The interview then proceeded to conduct an incident analysis of a recent emotionally arousing situation. This incident or situational analysis was then used as a lead-in to "vertically arrowing" (Kennerley et al., 2017) to identify deeper 'bottom line' beliefs (Fennell, 1997) about self and others. Once a certain depth in the discussion was achieved, the final stage of the interview was initiated. This consisted of 'horizontal' arrowing' that elicited underlying beliefs about how God and other religious phenomena are represented in co-inquirers' cognitive systems. Post-interview debriefs were performed and feedback sought before co-inquirers left the room.

3.3.6 Data Analysis

Given the overall aims of the study 'template analysis' - a thematic analytic style based on the works of Brooks et al. (2015), Brooks & King (2014), Crabtree & Miller (1992), and King (2012), was deemed most suitable for analysing the data. Primarily, template analysis was chosen because it had fewer explicitly specified procedures, allowing for the flexibility needed to be able to tailor the analysis and match it to the study requirements (Brooks et al., 2015). The flexibility alluded to here is mainly, though not exclusively, concerned with the technique's lack of insistence on a pre-determined number of levels of coding hierarchy, but instead allowing "the analyst to develop themes more extensively where the richest data (in relation to the research question) are found" (King, 2012, p 430).

Moreover, it is a technique designed to deal with analyses where some codes at least are generated a *priori*, while also permitting for the development of other codes inductively when necessary (Brooks & King, 2014; Crabtree & Miller, 1992; King, 2012). However, the analytic process was very mindful of what Brooks & King (2014) call the 'blinkering effect' caused by relying too dogmatically on a *priori*

themes and followed their advice by carefully considering the choice of a *priori* themes, limiting these as much as possible, and modifying them where the data required this. Finally, given the time constraints placed on a PhD project and the amount of data generated by sixteen interview transcripts, it was thought that template analysis was an ideal tool because it is less time-consuming than some other qualitative data analysis techniques (e.g., IPA) and can handle large data sets with relative ease (King, 2012).

Steps Taken in Data Analysis

1. *Interview transcription:* intelligent verbatim transcriptions of the recorded interviews were carried out by myself, research assistants (Ras), and a professional service. When someone other than I did the transcriptions, I made sure the transcripts were checked upon completion by comparing them to the original recording and reading through the texts carefully to check for any errors.
2. *Familiarisation with the data*: although I conducted all the interviews myself (so was familiar with the content of the transcripts), I nevertheless read through all the transcripts again to gain a broader overview of the data as a whole and begin the process of considering the applicability of the proposed *a priori* themes (the readings of the texts was accompanied by extensive note-taking).
3. *Preliminary coding of data*: Since theoretically informed 'hard' *a priori* themes (based on Young et al. (2006) schema model and CBT theory) were being used, I constructed a list of these themes, constituent codes, and definitions for each (Table 6). These lists were then used by the coders (myself and three Ras from the sample population) as the reference point for the initial round of coding. All three Ras who coded the data were trained on the definitions and coding process. Consistent with the recommendations by King (2012), coders erred on the side of inclusivity when/if they were in doubt as to whether a particular segment of text was relevant. Coders used this initial template to code a subset of the data (four transcripts) covering a cross-section of the experiences and issues pertinent to the study. During this stage, some discrepancies emerged in terms of how the definitions of some themes and codes were understood and applied to the data.
4. *The iterative process*: Initiating by the above, discussions between myself and Ras, and reflections by myself, took place that ultimately led to a) the revision of some definitions and codes (e.g., changing the term 'core beliefs' in childhood, preadolescence, and adolescence, to 'early beliefs'); b) adding the new code of 'theocentric' core beliefs (core beliefs that make an implicit or explicit reference to God); and c) the abandonment of some codes due to redundancy (e.g., physical sensations code); d) refining the application of some codes (e.g., when to apply the code 'thought' as opposed to 'emotion' and when a section of data might

be describing both in one sentence); e) the modification of the code 'memory' (as far as it is conceived of as being a component of a schema theme) to only include those memories that were emotionally salient. f) the introduction of the theme 'schema' to capture related constellations of cognition, emotions and behaviours. These modifications were incorporated into a new template and applied to a new sub-set of data (again four transcripts). It required several iterations and a number 'coding meetings' before a final coding template was formalised; consistency in the application of the coding template was achieved, and agreement that all relevant data in the sample transcripts was coded.

5. *Final template:* Once a final template was identified (Table 7) it was applied to the full data set. In doing so patterns across the data were sought with those themes giving the most useful insights in the light of the research objectives being prioritised (Brooks & King, 2014). The final template served as the basis for the interpretation of the data and a guide for presenting the results (Brooks & King, 2014).

Table 6 *A Priori Level and Second Level Themes (Including Parameters and Definition)*

Domain	Themes (and codes) (each level theme is coded under each of the domains)
1. Early religious schemata *(ages 0-5 or when started school*	Cognitions ('*Core' beliefs about self, the world or others; fixed rules one must live by; expectations; images; dreams, memories, and automatic thoughts*)
2. Preadolescent development of religious schemata (a*ges 5, or when started school, to 13, or puberty*)	Emotions (*emotional feelings descriptors e.g., sad, scared, happy, angry, etc.*)
3. Adolescent development of religious schemata (a*ges 13/14- 18*)	Physical sensations (*any feelings in the body related to pre- identified cognitions or emotions: e.g., stiff neck, sweaty palms, aches and pains, etc.*)
4. Adult religious schemata (a*ge 18+*)	Behaviours (*actions that can be observed objectively and are a result of cognitions, emotion or physical sensations*)

3.3.7 Methodological Integrity

The following strategies were used to ensure a rigorous analysis that was true to the co-inquirers lived experiences (Levitt, 2020), and one that was mindful of my subjectivities throughout the analytic process: First, 'thick' (Geertz, 1973) and rich data extracts were provided to illustrate the identified themes. Second, three Ras, who operated as coders, were selected from the sample population and employed to independently code a subset of the data and contribute to the development of the coding template. This use of sample 'peers' a) ensured that my interpretation of the data remained faithful to the experiences of the co-inquirers; b) provided a certain level of external objectivity and interrater

reliability; and c) through the individual feedbacks of the assistant coders, and regular conversations during the analytic process, I was able to gain greater confidence that the analysis captured the main relevant issues pertinent to the religious experiences of the study sample.

Table 7 *Final Template Including Modification of Themes (Parameters and Definitions)*

Domain (Life stage)	Themes (Sub-schema)	Sub-themes (Schema components)
1. **Early childhood** (Age 0-5/when started school)	**1.1. Early religious sub-schemata** **(**All cognitions, emotions, and behaviours reported when describing early childhood experiences)	**1.1.1 Cognitions** (*early beliefs; fixed rules one must live by; expectation; images; dreams, automatic thoughts, memories*) **1.1.2 Emotions** (*emotions nouns/verbs or adjectives e.g., fear, sorrow, guilt, scared, disappointed, etc.),* **1.1.3 Behaviours** (*actions are a result of cognitions, emotion, or physical sensations*)
2. Preadolescence (Age *5/when started school, to 13/puberty*)	**2.1. Preadolescent development of religious sub-schemata** (All cognitions, emotions, and behaviours reported when describing preadolescent experiences)	**2.1.1 Cognitions** (*preadolescent* beliefs*; fixed rules one must live by; expectation; images; dreams, automatic thoughts, memories*) **2.1.2 Emotions** (*emotions nouns/verbs or adjectives e.g., fear, sorrow, guilt, scared, disappointed, etc.),* **2.1.3 Behaviours** (*actions that are a result of cognitions, emotion, or physical sensations*)
3. Adolescence (Ages *13/14- 18*)	**3.1. Adolescent development of religious sub-schemata** (All cognitions, emotions, and behaviours reported when describing adolescent experiences)	**3.1.1 Cognitions** (*adolescent* beliefs*; fixed rules one must live by; expectation; images; dreams, automatic thoughts, memories*) **3.1.2 Emotions** (*emotions nouns/verbs or adjectives e.g., fear, sorrow, guilt, scared, disappointed, etc.),* **3.1.3 Behaviours** (*actions that are a result of cognitions, emotion, or physical sensations*)
4. Adulthood (Age *18+*)	**4.1. Adult religious sub-schemata** (All cognitions, emotions, and behaviours reported when describing early adult experiences)	**4.1.1 Cognitions** (*beliefs; fixed rules one must live by; expectation; images; dreams, automatic thoughts, memories*) **4.1.2 Emotions** (*emotions nouns/verbs or adjectives e.g., fear, sorrow, guilt, scared, disappointed, etc.),* **4.1.3 Behaviours** (*actions that are a result of cognitions, emotion, or physical sensations*) **4.1.4 Theocentric core beliefs** **4.1.4.1 Self** (*e.g., God referenced beliefs about self: e.g. I'm bad, I'm a sinner etc.)* **4.1.4.2 The world/Others** *(God referenced beliefs about the world or others: e.g., the world is a test for us all, others are going to hell)* **4.1.4.3 The future** *(God referenced beliefs about the future: e.g., 'I will be punished')*

Additionally, I kept a reflexive journal (Levitt, 2020) of my thoughts, emotions, and assumptions throughout the project. This, alongside supervision with my second supervisor (an experienced researcher and clinician), aided the process of identifying my own value-based interpretations (and how they could potentially impose on the data) and, where applicable, helped distinguish these from the co-inquirers' own intended 'meanings'. This was particularly important given my shared religious faith with the co-inquirers and my previous role as a teacher to some of them. Additionally, an audit trail of the developing analyses was kept (King, 2012). This log helped record revisions made to the coding template and the rationale for doing so (King, 2012).

Finally, integral to the epistemic interview method (Brinkmann, 2013) and interpre-viewing style (Dinkins, 2005) were regular questions designed to find disconfirming evidence for some of the emerging ideas I was formulating. This, with formal feedback at the end of interview sessions, and regular discussions with the three independent coders (during the analysis stage), ensured to the extent possible, that any confirmation biases I became aware of were constantly being challenged.

3.4 Findings

The interview transcription process produced hundreds of pages of text that included sections of data with no clear relevance to the research questions. Therefore, the findings reported below represent analyses of data that are directly relevant to the aims of the study.

A further procedural point relates to the way themes and subthemes are presented: namely, after organising the data into the domains, themes and subthemes described above it became evident that a descriptive label for each theme and cluster of subthemes was necessary. Therefore, the labels 'God' and 'eschatology' were applied to cognitions and emotions that either make a direct reference to God or to the afterlife (heaven, hell, grave, day of judgement, etc.). Furthermore, these two categories were merged into one theme (subschema) because there was an inextricable link between their objects of belief. In other words, fearing God's punishment on the one hand and fearing torment in hell fire were thematically linked. Also, 'prayer' and 'rules' (obligatory rituals) were treated as one theme given the significant overlap between the two. The other two themes identified in the data were 'forbidden love' and the weaker theme of 'jinn' (spirits).

3.4.1 Summary of Subthemes, Themes, and Domains

In the final analysis, the subthemes of '*cognition*, *emotions,* and *behaviours'* constitute each of the four subschemata (subschemata are, in this context, synonymous with themes). The subschemata were in turn organised under four domains describing four stages of life: Early Childhood,

Preadolescence, Adolescence, and Adulthood. The subschema God and Eschatology emerged strongly during early childhood and continued to be consistently reported throughout the course of life, thus representing a developmentally robust subschema. Beliefs and emotions associated with the Jinn subschema made a brief appearance in early childhood and preadolescence but seemed to dissolve thereafter. Although 'Prayer and Rules' was reported initially by only a very few co-inquirers in early childhood, by the time interviewees described their preadolescent religious experiences 'Prayer and Rules' became a highly salient feature of their religious cognitive representation. In adolescence, while 'God and Eschatology' and 'Prayer and Rules' remained important, the subschema 'Forbidden Love' emerged as the most prominent theme at this stage. In adulthood 'God and Eschatology,' 'Prayer and Ritual', and 'Forbidden Love' seemed to stabilise somewhat with each occupying similar emotional significance in people's religio-mental lives. During adulthood, several 'theocentric core beliefs' (categorised under the adult 'God and Eschatology' schema) were also identified.

Finally, not everyone reported entirely negative emotions and beliefs with regards to the religious subschemata described above. A few co-inquirers did declare benign beliefs and feelings. These more benevolent cognitions and emotions were noted and incorporated into the overall model (Figure 2).

3.4.2 Early Childhood (ages 0-5): 'God and Eschatology', 'Prayer and Rules', and 'Jinn'

Most of the co-inquirers described their earliest sense of God as being 'frightened' of Him: '*When I was younger than four, I was scared [of God]*' (i12). co-inquirers often attributed this sense of 'fear' of God and his perceived potential punishment to explicit warnings from parents. For example, one co-inquirer declared:

> *'I remember every time we did something that my mum got angry with, or that she thought was bad, she would say, you're going to go to hell if you keep doing that. (i7).*

The internalised belief that God was 'scary' seemed to penetrate deep into some individual's psyches evidenced by a report of a dream experienced in early childhood. In this dream one co-inquirer disclosed that, as a child:

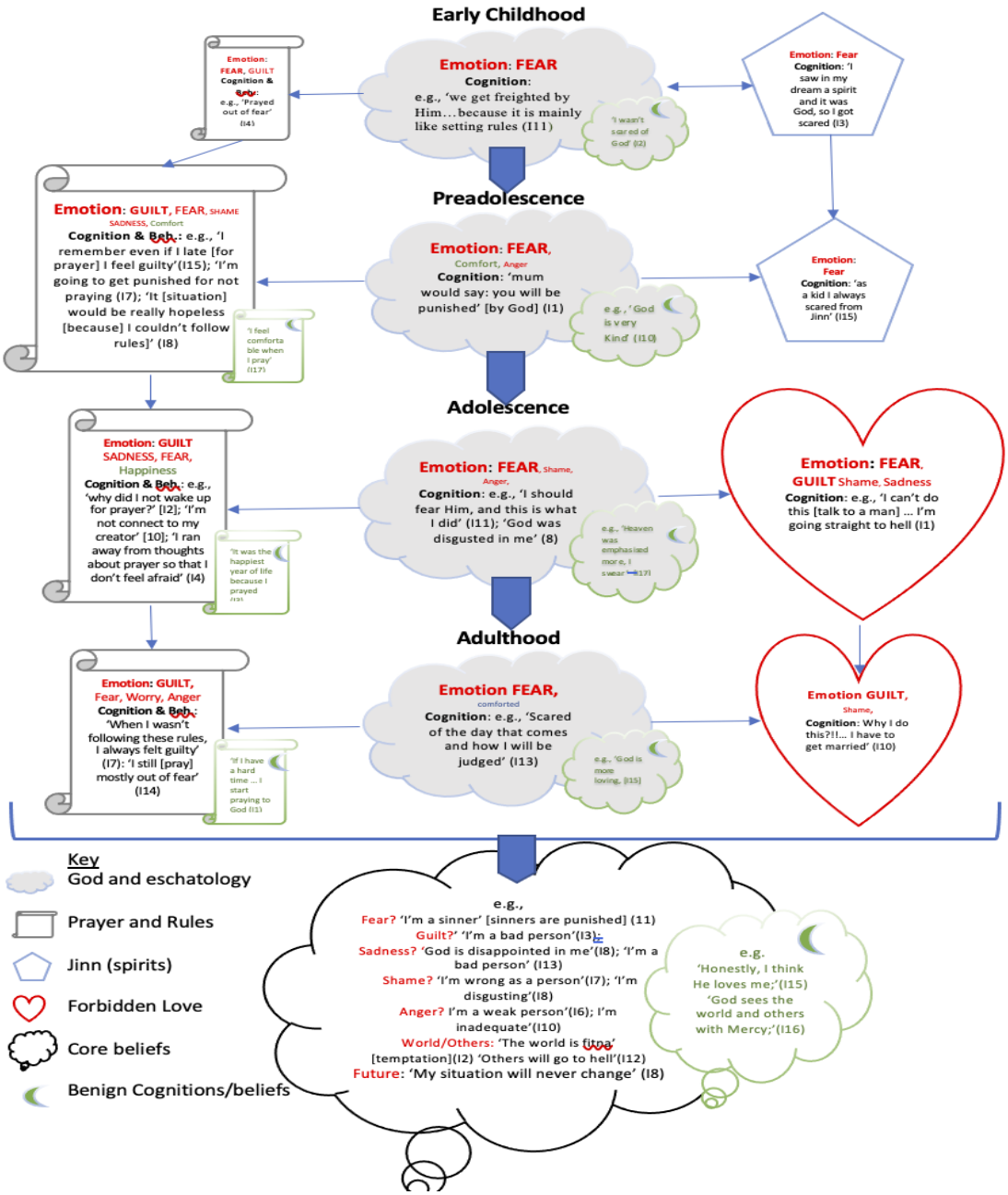
> '*I remember I had a dream where I saw a spirit thing, and in my dream that was God. So, I got scared because He looked scary to me.'(i3).*

God was seen as 'scary' and also perceived as being more likely to Judge a person harshly and subsequently send them to hell. The feeling was associated with God '*basically judges you'(i8)*. One co-inquirer summarised the early acquisition of these beliefs about God as judging as follows:

'*I was really scared that I might be judged for the way I was dressing, by God, because my mum used to always tell me that it's wrong to dress like that.' (i8).*

These beliefs seem to result in several behaviours that attempted to mitigate the sense of anxiety experienced. These behaviours included conformity to perceived religious commands (e.g., performing of prayer) or refrain from immoral acts (e.g., lying). Those few co-inquirers that did not report feelings of fear in relation to God either explicitly said '*God was not scary*' (i2), reported neutral feelings or said that they had no recollection of a sense of God at such an early age.

Figure 2 *Religious Schema Model*



(Note: the larger in size the icon symbolising the subschema, the more co-inquirers reported cognitions, emotions and behaviours associated with that subschema. Also, the larger the font size depicting the emotion, the more co-inquirers described that emotion)

As mentioned in the preliminary remarks above, another, albeit minor theme, that emerged at this early stage was associated with religious practice, specifically Prayer and Rules. This subschema was closely connected to the God and eschatology theme in terms of the affect it induced in people and the relationship it had to perceived divine expectations. One co-inquirer described how, from an early age, he '*prayed more out of fear than faith*' (i4). The fear that prompted the behaviour of prayer had to do with the apparent consequences of not praying namely: '... *If you're not praying, then you will be punished…' (i6).*

One co-inquirer also mentioned fear of spirits: *'…I believed in spirits because I was close to my mum [who believed in spirits]. So, I believed in it.'* (i3). This belief was closely related to her belief in God and was reflected in the dream quoted above.

3.4.3 Preadolescence (Age 5 or when started school; to 13, or puberty): God and Eschatology, Prayer and Rules, and Jinn.

Fear of God remained very salient at this stage of life too. Another co-inquirer gave an account of a dream she had during preadolescence which she remembered as being 'scary':

> *'I had a dream about God at the time. And I remember telling my mom about the dream. And in my dream God was scary. It was the day of Resurrection, that was the dream. And God was a minaret, but like a moving one. And we were hiding behind a curtain because God was angry. And there might have been like fire around, you know some kind of like… But God was scary.' (i14).*

Co-inquirers reported that these beliefs about God were imparted to them both informally through primary caregivers and significant others and formally through school instruction. For example, when asked which aspects of religion was emphasised more in primary school, one individual replied:

> 'I *don't remember, but I would hear the word 'Naar' [hell fire] more than 'Jannah' [heaven]... I would just hear it more, like, 'if you do this you are going to go to hell'…not so much of … 'if you do this you will go to heaven.' (i3).*

The most noticeable feature of this stage, however, was the strong appearance of the theme 'Prayer and Rules'. It was when describing this stage, that co-inquirers started to stress cognitions and feelings about the religious 'command' of having to observe the daily prayers and other rules. The predominant emotions associated with this theme/subschema were 'fear' and 'guilt'. A vivid illustration of how the

fear of not praying might have developed and subsequently maintained was given by a male co-inquirer:

> *'… At that period, when I did not pray for example or if I was a bit late for the prayer time, my mother did not hit me .... but she used to tell me that: 'oh, you are going to be in hell' because 'you did not pray', and I started to develop this fear inside of me'.*

When asked to say more the interviewee continued*:*

> *'So, at that time I have a phobia from snakes, and they… my uncle once told me punishments for people who don't pray… in the grave a huge snake comes and crushes their bones – squeezing them. I think that made me pray and stay along the Muslim teaching. But I won't lie to you – it was more out of fear than something you're doing because you believe in.' (i4).*

As indicated above another prominent emotion associated with prayer and rules was guilt: '*I was feeling guilty. Even at that time, I was feeling guilty that I don't pray…*' (i6). Other feelings relating specifically to conformity to perceived religious rules included 'sadness' because *'There's nothing I can do…it is hopeless'* [I try to conform but I can't]' *(i8)* and the 'shame' of others finding out that they didn't pray. Jinn was also mentioned again by one person when she disclosed that '*as a kid I always scared from jinn'* (i15).

Finally, a few co-inquirers did express benign beliefs about God at this age. These included the idea that God was *Kind*, *Merciful,* and *Forgiving*. Two also mentioned the comforting aspect of prayer:

> *I feel comfortable when I pray. And in this age, they told us 'when you pray you are connected with Allah.' So, you can tell Allah whatever you want. And He can listen to you. And your life is going to be good. And everything is going to be good if you pray.' (i17)*

3.4.4 Adolescence (Age 13, or puberty to 18) 'Forbidden Love', 'God and Eschatology' and 'Prayer and Rules'

The most prominent subschema identified at this stage was the theme encapsulated by the label Forbidden Love. All but two individuals reported strong negative emotions, thoughts, and behaviour with regards to romantic (not necessarily sexual) experiences in adolescence. Guilt and Fear were the two emotions reported most by participants at this stage. Speaking about her feelings for a boy in high school one woman said:

> ***'…** I think it was in tenth grade when I first liked a boy. And it made me wonder why I like a boy. Because, you know, according to like Islamic teachings, that's wrong. And*

so that was very confusing to me. And I always thought that it was only girls who come from bad families that develop feelings for boys. So, I felt very guilty about that…So when I liked a boy at some point, I felt like I was a bad woman, you know. I thought I was… you know, like all the negative names [people normally call women who have relationships with men].' (i14).

In response to a question about his feelings about having amorous sentiments and thoughts towards another person during adolescence, a man responded as follows:

'…I feel afraid. Because I don't know anything about them, like what would happen if I talk to her. They taught us, 'If you talk to girls they hit you, you will go to hell'. I don't know why they say you will go to hell.' (i12).

Shame was also cited by some co-inquirer as being a sentiment they associated with romantic attraction to others. For example, when asked if she had any romantic relationships during high school a Saudi female (now in her thirties) responded as follows:

'No. No, no. I feel because we grow up [believing] it's a shame on you if you talk to guys if you even stay with them. My dad doesn't even allow us to have phones. And we don't have a phone at home. The phone it's in my dad and mom's room. But this is my dad's rules. So, he doesn't allow the phones, and he doesn't allow us to go with the driver. He drops us to school by himself and picks us up by himself. So, I don't even experience any relationship with any other guy.' (i16).

Another reaction reported by a few other co-inquirers was that of 'sadness'. Describing her experience during her adolescent years this individual said:

'Well, I remember I was talking to my friend about a guy, and she told me that it's not right to pursue this thing because it's haram [forbidden] basically, and for some reason I was like devastated.' (i9).

Beliefs about God and the afterlife continued to be significant with the associated sense of fear persisting at this stage too. The vast majority of co-inquirers expressed that they still felt frightened from God and/or His punishment. A short statement in response to a question about how he saw God during his adolescent years one informant simply said: *'I still saw Him as frightening' (i6).*

The subschema 'Prayer and Rules' continued to be relevant during adolescence too, but with the emotion guilt being more prevalent among the reports given than that of fear. Individuals spoke about feeling guilty both when not praying at all, and when simply delaying prayer (i.e., praying but offering

the prayer later than its allotted time). Some also expressed guilt about not carrying out other religious duties or breaking perceived religious laws:

> Co-inquirer: '*I wanted to believe that we were supposed to cover up, we were supposed to pray, we were supposed to follow all these rules, and I did follow them strictly for a while, and then when I wasn't following these rules, I always felt guilty, I'm not supposed to do this.'*
>
> Interviewer*: 'So whenever you broke the rules, you felt guilty. How strong was that feeling of guilt?'*
>
> Co-inquirer: '*I would say it was very strong. It was a big part of my life at the time.' (i7).*

Although only one co-inquirer reported benign reactions to 'Prayer and Rules', given the depth of the feeling she expressed, it could not be left unreported here:

> Co-inquirer: '*…when I was 16, that was my happiest year*.'
>
> Interviewer: '*…tell me more about that.'*
>
> Co-inquirer: *'It was my happiest year only because I was praying five times a day. And it made my heart feel lighter. Even though I had problems I would still feel happy.'*
>
> Interviewer: '*Do you remember why you felt happy?'*
>
> Co-inquirer: '*Because I felt I had a strong relationship with God. Like, my faith was strong. That He was just there. And when I had problems or anything I would talk to Him.'*

3.4.5 Adulthood (18+): 'God and Eschatology', 'Forbidden Love' and 'Prayer and Rules'

As was the case with all the stages of life investigated, the theme 'God and eschatology' continued to be populated with fear-based emotions and cognitions – with the emphasis being fear of punishment in the hereafter. The following conversation illustrates this observation:

> Interviewer: *I wonder … how does God feature in your life now?*
>
> Co-inquirer: *The same idea as high school, yeah. So, he is the dominant. He [inaudible] of life, it's always written. Karma and things like that.*
>
> Interviewer: *And again, now when you think of God, what kind of emotions come to mind?*
>
> Co-inquirer*: I shiver [physically].*
>
> Interviewer: *Anything else?*
>
> Co-inquirer: *Just scared of the day that comes?*
>
> Interviewer: *Which day?*

Co-inquirer: *The day I face God. (i13).*

Sub-schematic elements that constituted the theme 'Prayer and Rules' were also mentioned by a small number of co-inquirers, with guilt being the predominant emotion expressed (worry, fear, and anger with self were also conveyed by individuals). When asked about how she felt about herself for not carrying out religious duties in the way she wanted to, one woman disclosed: *'Really bad! I feel like me being, like, not a good Muslim affects my self-esteem and makes me feel so guilty.' (i3).*

Forbidden love remained a significant theme at this stage of life as well, though not as powerfully expressed as it was in adolescence. Guilt again emerged as the most salient affect associated with romantic thoughts and behaviours.

It was during conversations about their current stage of life and beliefs that the I began to 'downward arrow,' in an attempt to uncover current underlying theocentric core beliefs. All but three participants articulated what might be described as negative beliefs about themselves, others, the world, and the future, in relation to God. The majority of co-inquirers expressed a belief that they were *'a bad person' (e.g., i13)* or that they were '*a sinner'* (e.g., i11) in some way. One individual even described herself as 'wrong as a person' *(i7).* These theocentric core beliefs were associated with feelings of guilt, sadness, fear, shame, and anger. A conversation with a co-inquirer (describing herself as a devout Muslim) about what she thought of herself proceeded as follows:

> Co-inquirer*: I think I need to do a lot more. Because I think I am not a good person. I think I need to be better, and I think I have to … I should seek forgiveness. Because I always pray that I don't want to die until Allah has forgiven me.*
>
> Interviewer*: And do you not think you're forgiven?*
>
> Co-inquirer*: No. I don't know why, but I don't think I am.*
>
> Interviewer*: …Is that what you believe?*
>
> Co-inquirer*: Yes. I … there's so many … it's not that I've committed a crime or something like that. But it's just this feeling. In Islam it also says you're not supposed to raise your voice to your mum or sibling. Sometimes I go so mad and I just say something to my mum and it's like in louder voice. I don't … I didn't mean …I don't mean to, but I do it. Then I apologise and I'm like, 'Please, please, please forgive me.' It's like an apology for mother and apology for God is the same thing. Mother will tell me, 'OK, I forgive you, whatever. But then, you know, how do you know that Allah has forgiven you?' That's the thing! (i1).*

In terms of beliefs about others, the majority (but not all) co-inquirers disclosed that those who do not share their belief are not saved. One individual expressed this clearly in the following exchange:

> Co-inquirer*:* *The right religion's Islam. Who follow Islam, heaven, who is not… hell, as we know but who say the shahada can enter Islam at any time.*
>
> Interviewer*:* *So is it fair to say that God sees people as two categories, Muslims and non-Muslims –*
>
> Co-inquirer*:* *Muslim and non-Muslim, yeah.*
>
> Interviewer*:* *And the Muslims are gonna go to heaven and non-Muslims go to..?*
>
> Co-inquirer*:* *To hell, yeah. (i12)*

The world was seen by many as a place of '*fitna'* (temptation and test) and therefore one must be very suspicious of it. The concept of future (from a religious point of view) was spoken about in two ways: (a) as a 'qualified' temporal/worldly future whereby good fortune is contingent upon following perceived religious rules; and (b) an 'eschatological' future where one's ultimate destiny is either heaven or hell. More co-inquirers expressed the belief that they would be punished or judged as being bad, than otherwise.

Finally, not all co-inquirers related the type of theocentric core beliefs reported above. A few expressed the belief that God loved them, and that God was ultimately All-Merciful. As one woman put it: '*Honestly I think he loves me'* (i15). Another declared:

> *'…how people worship God, or their connection with God, that's between them and God. It differs. We can't say that if someone wears differently or doesn't wear a hijab that they will go to hell. Because God has mercy. So, he sees each person by his heart.' (i2).*

3.5 Discussion

This study aimed to investigate if cognitive representations of religious beliefs identified in the current study sample satisfy the criteria for a cognitive schema as defined by Williams (1997) and Young et al. (2006). And if so, what the critical features and content of these schemata might be.

3.5.1 Identifying Cognitive Representations Classifiable as Religious Schemata.

The findings of this study provide evidence for the existence of a coherent mental structure comprising cognitive representations with specifically religious themes among the sample interviewed. These

representations exhibit the key features of schemata as outlined by Williams (1997) and Young et al. (2006). The following is a summary of these criteria and evidence for their fulfilment.

Criterion 1: ***A Schema Consists of a Broad Pervasive Pattern*** **(Young et al., 2006)** ***With a Consistent Internal Structure Used as a Template to Store and Process New Information by Guiding Attention, Expectations, and Interpretation of Such Information*** **(Williams, 1997).** There was a notable convergence in the interview data between co-inquirers on the nature of their religious beliefs and associated emotions. This is evidence for the existence of a broad consistent pattern in the way God and religion are perceived. These patterns (or schema) were limited in theme and content however, which implies that once developed, attention may be biased toward only information for which a schema already exists, thereby restricting the acquisition of new content.

Criterion 2: ***A Schema is Represented as Abstract Prototypes of Environmental Regularities*** **(Williams, 1997)** ***but Contains Concrete Memories, Emotions, Cognitions (Core Beliefs), and Body Sensations*** **(Young et al., 2006).** As stated above, the consistency between different co-inquirers in the way schema themes were reported suggests the existence of a discernible overall prototype. However, on an idiosyncratic level, this prototypical frame is populated by concrete cognitions (memories, beliefs, rules, etc.) and emotions that are unique to each individual.

Criterion 3: ***The Schema Develops During Childhood or Adolescence*** **(Young et al., 2006).** The schema content follows a clear developmental pathway that undergoes subtle changes during childhood and adolescence but seems to stabilise in adulthood (although this cannot be definitively determined at this stage, as most co-inquirers were in their twenties). The developmental acquisition of new schematic content appears accumulative. In other words, previous components of a schema are maintained, while additional elements are added, following new experiences gained at the subsequent stage. The previous components are not replaced, however, but are built upon. For example, as small children, the schema is dominated by a view of God as being scary; whereas in preadolescence, the duty to perform prayer becomes obligatory (as perceived by co-inquirers), so as well as fear of God Himself, a new layer to the schema develops where there is fear of God's punishment for not praying, and guilt for not performing religious duties in general. The schema acquires yet a new stratum in adolescence when fear of having romantic relationships, or guilt for merely entertaining such sentiments, develops. However, to reiterate, the previous layers of the schema remain active with theocentric beliefs constituting a core cross-generational component.

Criterion 4: ***A Schema is Reinforced Throughout One's Life*** **(Young et al., 2006)** ***Through 1 Above, Meaning, Attention is More Likely to be Paid to Information That is Relevant, and That Which is Relevant is That for Which a Schema Already Exists*** **(Williams, 1997).**

and

Criterion 5***: A Schema is Relatively Stable*** **(Young et al., 2006)** ***Because of criterion 4.*** The resilience and stability of these core themes across the developmental milestones may be due to attentional bias toward information that confirms pre-existing beliefs. Evidence for this may be inferred from the observation that reported beliefs, memories, and feelings seem to be similar across the different stages of life. Co-inquirers were inclined to recall comparable beliefs and feelings to ones they report for earlier stages (e.g., God was scary during early childhood and remained so during pre-adolescence and adolescence etc.). This may suggest a limitation in acquiring contradictory or varied information for which a schema content already exists. Furthermore, as well as this suspected cognitive bias through selective attention against dis-confirmatory new information, there was also environmental reinforcement of schematic content (especially beliefs) across the life stages by parents and significant others (relatives, teachers, older siblings, etc.) through both explicit direct instruction, and indirectly by means of observational learning (Bandura, 2008).

Criterion 6: A ***Schema is Modular in Nature in That Activation of One Part Produces Activation in the Whole*** **(Williams, 1997).** Co-inquirers often gave answers about prayer when asked about God, or about the afterlife when asked about romantic love, for example. This suggests that units constituting these schematic structures are highly interconnected with activation of one component producing activation of other related elements.

Criterion 7***: Concerning One's Religious Beliefs and Relationship to the Divine.*** Finally, the fact that the reported schema content clearly contained religious themes and associated emotions justifies the conclusion that this schema is identifiably religious in nature.

3.5.2 Salient Features of the Religious Schema Identified

The religious schema identified in this sample contain cognitions (beliefs, memories, images, etc.) and feelings that tend to be negative in nature. The technique used to elicit the underlying beliefs and emotions was carefully designed to be neutral and curious, with particular attention paid to asking non-leading questions. However, when responses were given, they generally described beliefs about God as being angry, scary, punishing, judgemental, and so forth. There were instances when co-inquirers expressed a belief in God as being merciful and loving, but these were the exceptions rather than the norm.

These negative cognitive components of the schema originated in early childhood, and as explained above, remained relatively stable across the lifespan. These beliefs were predominantly associated with fear, which constituted the core emotion.

However, as individuals progressed through the various life stages, they acquired new experiences that seemed to affect change in their belief system (Fowler, 1981, 1991, 1995; Parker, 2010). For example, in preadolescence, religious rituals, especially prayers, are taught to be obligatory, which lead to feelings of guilt when not preforming them on time; or fear of God's punishment when not praying at all. There were occasions when co-inquirers spoke about prayer as a source of comfort, but the more dominant emotions associated with this element of the religious schema tended to be guilt and fear.

During adolescence, on the other hand, romantic relationships became the context around which the emotions of fear, guilt, and shame constellated. In adulthood, guilt appeared as a prominent emotion in relation to lack of punctuality in performing prayers or religious disobedience. Guilt was also associated with romantic relationships at this stage, even more so than fear. In adulthood, all components of the schema identified seemed to ultimately coalesce around core beliefs about self such as "I'm a sinner", or "I'm a bad person"; the world being a testing (*fitna*) place and others, who do not conform to religious law, destined to suffer (both in this world and the next). In terms of core beliefs about the future, these reflected two different understandings of the concept. There was a corporeal worldly future and an otherworldly (afterlife) one. Success in both, however, was seen as contingent upon current moral and religious conduct.

Most (not all) participants described secure and close childhood relationships with caregivers and siblings. However, as previously mentioned, the religious schema was nevertheless characterised by negative beliefs and emotions. This observation seems to support the contention that religious schemata are distinct and discrete structures that are independent from personal schemata. This finding appears inconsistent with at least one aspect of the correspondence hypothesis (Granqvist & Kirkpatrick, 2008; Kirkpatrick & Shaver, 1990), where relationships with early caregivers are thought to be mirrored in internal representations of God. In this sample, apparently secure relationships with caregivers were not reflected in a benevolent religious schema. One explanation for the lack of alignment between presumed early attachment styles and religious schemata may be the fact that any correspondence between the two is overridden by the overt overemphasis (through explicit religious instructions) on a particularly punitive understanding of religion.

Another noteworthy finding was the relatively little mention of Jinn (spirits) in relation to religious experiences. Despite ample evidence that belief in Jinn is common among Muslims (AN et al., 2020; Lim et al., 2018; Pew Research Center, 2012), it was not frequently discussed by the co-inquirers in relation to their religious experiences. The Quran does endorse a belief in Jinn with a whole chapter (chapter 72) in the Quran called "Jinn". A reason for co-inquirers not talking extensively about such spirits in relation to religious schema may be because, in this cohort at least, Jinn is seen more as a cultural phenomenon than a religious one, and therefore belonging to a different conceptual structure.

3.5.3 Development of Emotional Aspects of the Schema

The findings of this study suggest that the developmental trajectory of the emotional content of the religious schema is consistent with established theories of emotions, such as the James-Lang theory (Lang, 1994). This theory proposes that emotions have biological, social, and developmental determinants (Buss et al., 2019), and that humans possess a set of discrete basic emotions that are cross-cultural (Ekman & Friesen, 1971). These basic emotions of happiness, anger, fear, surprise, sadness, and disgust are defined as "natural kinds of emotions that do not depend on cognitive development for activation" (Buss et al., 2019, p. 10). Appearing in early infancy, these emotions nevertheless remain relatively stable across childhood (Ackerman et al., 1998). On the other hand, emotions such guilt and shame are considered dependent emotions (Buss et al., 2019, p. 10) or emotion schemas (Izard, 2007) precisely because they *depend* on more complex cognitive appraisals and 'theory of mind' for their experience, and develop later in childhood (Buss et al., 2019).

The findings of this study support these hypotheses as the basic emotion of fear was reported more frequently by interviewees when speaking about their earliest memories of religious phenomena. However, they tended to describe feelings of guilt and shame more often in relation to later childhood and adulthood religious life. Furthermore, the reported guilt among co-inquirers was often associated with moral appraisals regarding *behaviours* such as neglecting religious duties, or having a romantic relationship; while shame was more closely linked to seeing *themselves* (I.e. not just their behaviour) as faulty in some way (Miceli & Castelfranchi, 2018).

3.5.4 Schema Content and Links to Specific Interpretations of Religious Teachings

The content and developmental pathway of this schema seem to reflect a particular interpretation of Islamic teachings with regards to religious obligations. In certain interpretations of Islamic law that may loosely be described as Salafi or Wahabi (a puritanical and literalist approach to text), much emphasis is placed on a famous hadeeth in which the prophet reportedly advises the faithful to

command their children to pray when they reach the age of seven (al-Sijistānī, 1969; Tirmidhī, 1970). Accordingly, co-inquirers reported strong beliefs and feelings about prayer which began during preadolescence (around the age of seven). Also, guilt, fear, sadness, and shame with regards to romantic feelings become a salient feature of the schema for the first-time during adolescence. This again is based on a certain interpretation of religious law, which regards romantic feelings as forbidden even in the absence of a relationship or sexual intimacy—an interpretation which co-inquirers seem to be endorsing.

These interpretations of Islamic law are by no means universal, however. For example, it is well known that in Islam, a person is not accountable for their actions before reaching a certain level of physical and emotional maturity. So the idea of punishing a child for not praying is unsupported according to most Muslim jurists (Tarazi & Siddiqui, 2001). Furthermore, there seems to be a general consensus among mainstream Muslim scholars that feelings and sentiments of romantic love are perfectly permissible (Sayfuddin & Muhametov, 2004), even if expressing these in premarital sexual relations is forbidden. As well as a certain bias in interpreting Islamic law, another possible explanation for the reported anxiety around romantic relationship maybe a type of emotion-action fusion, where individuals believe that simply having feelings is morally equivalent to acting on them.

3.5.5 Limitations of the Study

The current study has several limitations that warrant consideration. First, the sample size is small, thus constraining the generalisability of the findings to the broader population. Second, the mean age of the sample is 24 (SD 5.37), suggesting older cohorts are not represented. This limitation is particularly significant in a region where rapid socio-economic developments have taken place over the last 10-20 years potentially leading to intergenerational shifts in attitudes. Third, recruitment of participants was not based on probability sampling methods; therefore, many selection biases are intrinsic to the final sample.

There are also important characteristics that I bring as a researcher that may have affected the study's process and outcomes. Despite striving for objectivity and impartiality during both the interview and analysis stages (and adopting overt strategies to that end), my similar cultural and religious backgrounds to the co-inquirers could have impacted the research. While this shared background facilitated a deeper connection, it also raises the potential for preconceived notions or biases on my part about the co-inquirers' experiences. My personal religious experiences, including my own challenges in trying to reconcile certain interpretations of religious teachings and living in a post—modern Western society, may have unconsciously shaped the types of questions posed and

conclusions drawn from the responses. Additionally, as a cognitive behavioural therapist my focus was naturally on cognitive and emotional aspects of religious beliefs, possibly overlooking other important dimensions of religious experiences. Finally, my prior role as a lecturer to some of the co-inquirers could have introduced unhelpful power dynamics issues that may have affected the data. In this cultural context, where university professors are held in high esteem, the likelihood of demand characteristics or social desirability biases is increased. More specifically, co-inquirers might have tailored their responses, either to align with what they perceived as my expectations or due to reluctance in sharing views they thought might be seen negatively by me.

Despite the limitations highlighted above, when approached with sufficient caution, the findings provide preliminary evidence of the existence of a distinct religious schema within an indigenous Muslim population. This schema appears to contain negative interpretations of certain religious beliefs, with such beliefs often associated with negative emotions. However, before any conclusions can be drawn with regard to the maladaptive or psychopathological nature of this schema, further empirical investigations are necessary. Such investigations are the focus of the next two chapters.

CHAPTER 4: An Instrument for Assessing Neurotogenic Religious Schemata: The Religious Schema Questionnaire (ReSQue)

4.1 Introduction

Religion and spirituality (R/S) have long been recognized as important aspects of human experience, playing a substantial role in shaping individuals' worldviews (Peterson, 2001), behaviour (Shariff & Norenzayan, 2011), and well-being (Koenig, 2009; Koenig & Al Shohaib, 2017; Lucchetti & Lucchetti, 2014; Moreira-Almeida et al., 2006). R/S can offer a sense of higher meaning to personal suffering (Lewis Hall & Hill, 2019) and help individuals cope more effectively with distressing life events (Pargament, 2001). Indeed, significant empirical evidence has demonstrated a positive link between R/S and various indices of physical and mental health as shown in chapter one, section three of this thesis. However, as also highlighted in chapter one, section eight, the relationship between religion and mental health is complex and multifaceted. While a substantial corpus of empirical research points to the beneficial effects of religion, there is also a body of work that suggests negatively biased interpretations of religious teachings may be associated with adverse mental health outcomes (Exline, 2013b; Exline & Rose, 2005).

A potentially helpful heuristic in investigating religious beliefs empirically is presented in chapter one, section 1.2.3.5, which conceptualises religious beliefs as forms of cognitive schemata. The utility of applying the concept of schema to religious beliefs is associated with both theoretical (Koenig, 1995; McIntosh, 1995) and empirical support in the literature (e.g., Streib et al., 2010) and has been discussed at length previously, with religious belief developmental processes highlighted in the introduction to chapter three.

Briefly however, the application of the notion of schema to mental disorders was proposed by Young and colleagues (Young, 1990; Young et al., 2003, 2006). Their model has led to a theoretically coherent and clinically informed approach to working with what Young terms as Early Maladaptive Schemas (EMS). This schema-focussed approached to therapy has received empirical support for its effectiveness with a variety of mental disorders, including: personality disorders (e.g., Arntz et al., 2022); complex trauma (e.g., Boterhoven de Haan et al., 2017); eating disorders (e.g., McIntosh et al., 2016); depression (e.g., Körük & Özabaci, 2018); and anxiety disorders (e.g., Peeters et al., 2022).

Young's EMS model offers a useful and deeper understanding of the way maladaptive schemata develop in early childhood and are maintained and elaborated throughout the course of life. An early maladaptive schema, according to Young et al (2006) is identified as a significantly maladaptive cognitive structure that contains memories, emotions, and sensations about oneself and relationships, formed initially during childhood or adolescence, and reinforced throughout life (Young et al., 2006). It is postulated that maladaptive schemata are often activated in times of stress or uncertainty,

shaping an individual's interpretation of the situation and guiding their responses (Alford et al., 1997; Beck, 1979; Young et al., 2003).

While adaptive religious schemata may promote psychological well-being, it is hypothesised that maladaptive religious schemas may contribute to psychological distress and serve as barriers to effective coping. However, as far as I am able to establish, no previous work has been carried out in applying the concept of EMS to religious beliefs. Nor have there been attempts to adequately identify and assess the content of such a schema among a Muslim population (see chapter one, section 1.3.4). But given the potential impact of religious schemata on mental health, there is a need for the development of reliable and valid measures to better assess these constructs.

A review of published research on existing measures that specifically target Muslim populations found that available studies have often relied on constructs borrowed from the wider psychology of religion literature (Amer, 2021); and none has focussed on religious schemata. Indeed, Amer (2021) identifies 36 scales that are either specially developed for a Muslim population or modified from other scales that initially targeted Judeo-Christian populations. The constructs measured by these Muslim focussed questionnaires (as classified by Amer (2021)) include: *general religiosity* (e.g., González, 2011; Tiliouine et al., 2009); *religious orientation* (e.g., Hodge et al., 2015; Khodadady & Bagheri, 2012); *religious beliefs and practices* (e.g., Alghorani, 2008; Olufadi, 2017)*; moral values and ethics* (L. J. Francis et al., 2008)*; religious coping and support* (e.g., Aflakseir & Coleman, 2011; Amer et al., 2008)*; quest* (Dover et al., 2007)*; mysticism* (Joshanloo & Rastegar, 2013)*; other* (including afterlife motivation, Islamic orthodoxy, spiritual jihad). None specifically measure maladaptive religious schemata. Studies that have attempted to investigate religious schemata among Muslims, such as those by Ghorbani et al., (2016) and Tekke et al. (2015), have used the Religious Scheme Scale (RSS) which was developed by Streib et al., (2010) using western populations, and which assesses dimensions such as truthfulness of text, fairness tolerance and rationality, and xenosophia/inter-religious dialogue. Likewise, none of these subscales directly assess schemata implicated in psychopathology.

Since this thesis aims to examine the link between maladaptive religious schemata and common mental health issues in a Muslim context, and due to a dearth of existing measures, it was important to create a scale targeting neurotogenic (neurosis inducing) dimensions of misinterpreted religious beliefs and associated emotions (conceptualised collectively as a schema). The present study therefore endeavours to develop and validate a new instrument called the Religious Schema Questionnaire (ReSQue), designed to specifically assess neurotogenic misinterpretations of religious beliefs among a population of religiously conservative indigenous Muslims. As stated previously the development of the ReSQue is informed by the CBP - schema model (Williams, 1997; Young et al., 2003, 2006) and the

general literature on the relationship between cognitive appraisals and mental disorder. The validation process involved psychometric testing, including exploratory and confirmatory factor analyses, test-retest comparisons to assess temporal reliability, and face and construct validity tests.

Development of the Maladaptive Religious Schema Questionnaire

The questionnaire was developed and tested in three phases. In phase one, a large item pool was generated through qualitative interviews conducted with participants drawn from the study population (see Chapter 3). The pool of initial items was intentionally kept large to capture as many components of potential underlying religious schemata as possible. The item generation stage included an acceptability evaluation process and input from a focus group, before it was deemed suitable for preliminary testing. In phase two, the initial questionnaire items were administered to a sample of Muslim, Gulf Cooperation Council (GCC), university students, and were then analysed using exploratory factor analysis, resulting in a substantial reduction in the number of items. In phase three, reduced items questionnaires were tested with a new sample in order to confirm the factor structure of the scale. Other validity and reliability tests were also conducted. Specific details in relation to each stage of the questionnaire development process are reported below, followed by results obtained.

4.2 Phase 1: Questionnaire Development

4.2.1 Method

Participants

Initial Item Generation (Qualitative Study)

Thirteen of the 16 participants in the qualitative interview (from which the initial questionnaire items were generated) were students from a large national university in the Gulf. The remaining three were other GCC nationals studying at a British University. Participants were purposively sampled in order to reflect, as much as practicably possible, some of the important characteristics of the study population. Participants were recruited through word of mouth, initially by me, and then snowballed to colleagues of participants who met certain demographic criteria. These criteria included being a Muslim, either a Gulf national, or having grown up there until the age of eighteen. Participants were also required to be over 18 years old. Demographic data were collected using pencil and paper forms. However not all sections of all the forms were completed by all the participants (items not competed included the *mathhab* a person belonged to, what doctrinal school they adopted, and so on, with some commenting that they didn't know these details). A description of the sample is provided in Table 8.

Table 8 *Participant Characteristics in the Initial Qualitative Interviews*

	All participants	
	Mean	**SD**
Age (n = 16)	24	5.37
	n	**%**
Sex (n = 16)		
- Female	9	56
- Male	7	43
Nationality (n = 16)		
- GCC	12	75
- Non-GCC	1	6
- Dual national (GCC and other)	3	19
Religiosity (n = 16)		
- Religious	9	56
- Non-religious	5	31
- Decline to answer	2	13
Socio-Economic Status (n=15)		
- Upper class	1	7
- Upper middle Class	7	46
- Middle Class	6	40
- Lower middle Class	1	7
1st Language (n = 16)		
- Arabic	12	75
- Other	3	19
- Bilingual	1	6
Current Mental disorder diagnosis (n = 15)		
- No	12	80
- yes	3	20

n = 16 unless otherwise stated (total ns < 16 indicate missing data).

Participants in Focus Group

Students from the same large university in the Gulf were invited to take part in a focus group (again, by word of mouth). Nine students volunteered. The students ranged in age from 19 to 24 (*M* = 22). They included seven females and two males. All self-identified as Muslim, GCC nationals, and all spoke Arabic as a first language but had an advanced level proficiency in spoken and written English. All described themselves as religious (i.e. believing and practicing) to at least some degree. This group was consulted for cultural/religious appropriateness of items, usability of items, to establish face validity, and to pilot the first draft of the questionnaire.

Procedure

Qualitative Interviews & Item Pool Development

Items for the Religious Schema Questionnaire (ReSQue) were initially generated from the qualitative interviews (carried out in English). Interviewees were asked about their religious beliefs and experiences both in childhood and as adults (see chapter three). The Socratic Dialogical Interpre-view (SDI-v), a research interview tool specifically developed and trialled during the pilot stage of this thesis (reported in chapter two) was used to elicit relevant religious experiences and associated core beliefs, underlying assumptions and emotions, all of which were hypothesized to constitute religious schemata.

The interviews were semi-structured with the main question themes predetermined before the interviews and shared with participants during the agenda setting stage at the beginning of the discussion. As is common practice in qualitative interviews, initial open-ended questions about the participants' religious experiences during different stages of their lives were posed. The responses that followed prompted further questions. An emotionally salient situation was then elicited which commenced a series of questions that downward arrowed (Kennerley, 2017) to relevant religion-themed schemata. Interview data were analysed using template analysis (Brooks et al., 2015; Brooks & King, 2014; Crabtree & Miller, 1992; King, 2012b). Using this theory-led deductive approach to thematic analysis, four initial domains were described in the study as life stages were identified: 1) early childhood; 2) preadolescence; 3) adolescence; and 4) adulthood. Among these domains the following themes were extracted: a) God and eschatology; b) Prayer and Rules; c) Forbidden Love; d) Jinn; and e) Core Beliefs. Each of these themes (sometimes referred to as subschemata) contained the following subthemes: i) cognitions (includes beliefs, rules, expectations, memories, images, etc.); ii) emotions; and iii) behaviours. See chapter three for full details of the qualitative study.

Adaptation for Religious Acceptability

Given the religio-cultural and ethical context in which the study is situated, it was important that very careful consideration was given to the wording and content of questionnaire items prior to presenting them to the study sample. Even though all the statements used were generated by participants, who were themselves Muslim; some statements nevertheless needed to be moderated in order to accommodate for local sensitivities. This adaptation process was carried out in three stages: 1) Using my classical Islamic studies background, I reworded a number of statements so that they respected public sentiments while at the same time retained fidelity to the overall meaning expressed in the original statements; 2) consulting a local expert (Gulf national and associate professor at a local university) on whether the rewordings were appropriate; and 3) The focus group was asked for feedback on the initial items generated. This same focus group would subsequently participated in piloting the draft questionnaire.

Focus Group Consultation and Feedback

The initial draft items were presented to the focus group. The group was consulted to assess for face validity (Kumari et al., 2020), readability of items, obtain participant feedback on statements, as well as elicit views on acceptability.

More specifically, when examining the items, members of the focus group were asked to comment on whether the questions were a) clear; b) answerable; c) although uncomfortable at times, was the level of discomfort acceptable? d) although there are many questions, were there in fact too many

questions? e) although some questions were similar, were they too similar to the point where they are in effect asking the same thing?

In order to mitigate the potential problem of bidirectionality (i.e., to determine whether current representations of beliefs were a *consequence* of current low mood or anxiety states rather than causative of these mood states), it was important to enquire about the childhood aetiology of any maladaptive religious beliefs and related emotions. Developing a retrospective questionnaire that elicited from adult participants beliefs established in childhood was an attempt to do this. The item content and number of the childhood experiences version of the questionnaire was exactly the same as the adult version, with the only difference being the predicate of the sentence ("growing up…" as opposed to "as an adult…"). Developing a childhood version also allowed for testing if the subsequent beliefs conformed with the important assumptions that maladaptive schemata often have their origin in childhood (Young et al., 2003, 2006).

Finally, after careful deliberations about the style, format, and presentation of the questionnaire, it was decided that Young's Schema Questionnaire (Schmidt et al., 1995) provided a suitable template for presenting the scale items and for recording participant responses to the questions (namely using a 6-point Likert scale). These two versions are the C-ReSQue which elicits retrospective beliefs about childhood and the A-ReSQue which elicits current, adult, beliefs.

Piloting the Questions with the Focus Group

Once the face validity of the item content was confirmed by the focus group, a preliminary questionnaire format was constructed, with each member of the focus group given copies of the two versions of the scale to complete and to provide feedback on. Members were asked to comment on the readability of the final questionnaire format, order of item presentation, suitability of the scoring scale, time taken to complete each version of the scale, and any other issues they felt needed to be addressed. Comments were noted and actioned.

Translation Procedure

Although I am a native speaker of both English and Arabic, to reduce any potential biases I did not carry out the translation of the items myself, but delegated this task to other suitably qualified individuals. The translation process was conducted in three stages:

> *Stage 1 – initial translation*: Three volunteer final year bilingual (i.e., native Arabic speakers with advanced level English) university students (all GCC nationals), independently translated all the final items (100 items) of the questionnaire from English to Arabic. When carrying out the translation, they were requested to prioritise both the accuracy of key technical terms

(e.g., those describing emotions and cognitions) and the syntactical structure of the sentence to ensure they mirrored, as much as possible, the original English.

Stage 2 – consensus in initial translation: The three translators compared their translations of items. Where there was 100% agreement those translations were retained. Where there was divergence, the translators discussed the discrepancies and deliberated on them until a consensus was reached. Once agreement was achieved, the final Arabic wording was accepted and assumed to be a good reflection of the English.

Stage 3 – back translation: Two bilingual licenced clinical psychologists (Egyptian nationals) working in the Gulf translated the items back from Arabic to English. It was felt important to recruit speakers of a different Arabic dialect, as the study population could potentially read in different Arabic dialects. Two main issues arose at this point: The first concerned the word *A'taqid* (أعتقد) which could be translated as both "I believe" (classical Arabic) and "I think" (modern Arabic). On two occasions, translator one translated this word as "I think" and on one occasion as "I believe." The second translator consistently translated this word as "I think." The alternative to this word is the word *O'min* (أؤمن) which also means 'I believe'. However, 'I believe' in this sense has a more formal religious connotation to it, as in: "I believe this because it is an article of faith to do so," rather than: "I personally believe such and such to be the case." So, it was decided to keep the word A'taqid as a translation for the word "believe" rather than adopt the word O'min. The other issue was a slight discrepancy in the choice of sentence structure between the two professionals. For example: translator one translated one of the items as: "…. God sees me as a sinner," whereas translator two chose: "…. God sees me as a person with sins." In cases like this, the more grammatically correct backtranslation was identical with the original English.

4.2.2 Results

Item Pool Generation

One hundred ninety-seven statements by the 16 participants were initially extracted from the qualitative study. In order to ensure no important statements or adjectives were excluded at this stage, phrases were obtained from every participant's transcript. However, having included phrases by each participant meant that statements with very similar meanings were repeated by different participants. Therefore, only one phrase from any two or more that conveyed similar meanings was retained. Furthermore, the decision was taken to integrate the behaviours theme into either the emotions or cognitions themes. For example: "*As a child I practiced [behaviour] religion more out of fear [emotion] than out of love,"* was integrated into the emotions theme.

Given that one of the aims of the project was to identify maladaptive religious schemata, only statements expressing negatively biased cognitions and emotions were retained. Negative bias and maladaptiveness were determined using two criteria: a) assertions that described negative beliefs and emotions associated with religious phenomena; and b) statements that may be perceived as excessively strict relative to moderate/classical understandings of Islamic teachings. For example, a statement that described feelings of guilt after committing a major sin were excluded because in standard Islamic theology, sin is an immoral act that one should not commit and where subsequent feelings of guilt are "normative." Whereas if a participant stated that they believed "they would go to hell for simply not praying *on time;"* such an item was retained because there is no *Ijma (*إجماع*)* (unanimous Islamic scholarly consensus) in mainstream Islamic jurisprudence as to whether delaying prayer was actually an *Ithm* (إثم) "sin," and therefore punishable; or whether it is simply *makrouh* (مكروه) "discouraged." Retaining only highly negatively biased statements in the questionnaire allowed the questionnaire to situate itself within normative Islamic teachings, thus considering *deviation* from such norms as maladaptive, rather than the norms themselves as being maladaptive.

Following the above process, 132 items were retained. These items were in turn re-examined for acceptability and further semantic duplications. For example, "*As an adolescent, I felt very bad (ashamed) when I had romantic feelings towards someone even if I didn't act on them,"* and, "*As an adolescent, I felt ashamed for having romantic feelings even if I didn't act on them,"* were considered highly similar and therefore one statement was discarded. Subsequently, 117 items reflecting all the key features of each theme (see table 9) identified in the qualitative study, were presented to the focus group for face validation and further acceptability testing.

Focus Group Feedback

Items deemed lacking in acceptability by the group were either reworded or discarded. For example, some participants felt: "*As a child my parents 'wanted' to instil the fear of God in me,"* sounded "too accusatory of parents" in a culture where parents are held in high esteem, and was therefore changed to "*As a child the fear of God was deeply instilled in me.*" Also, inaccurately worded items such as, for example: "*As a child I believed that if I commit sin I will get possessed by demonic spirits?"* the word demonic was replaced by the Arabic word for demon—*Jinn*. Items that were too general, for example: "*as an adolescent I was afraid of anything to do with romance because It's haram"*—the word *anything* in this example was considered too general and the sentence modified to be more specific.

The group also added items that they felt captured important features of relevant religious beliefs (and related emotions) that were not represented in the original list. In total, 11 items were added at

this stage. Items were categorised into six emotion domains and one cognition (core beliefs) domain. The choice of domain was based on the crucial (and perhaps primary) role negative emotions play in maladaptive schemata (e.g., Arntz, 2012; Arntz & Weertman, 1999; Fassbinder et al., 2016; Kellogg & Young, 2006). This classification not only facilitated the structuring of the extensive item pool into meaningful domains, but also retained the same categories from the qualitative study to further classify items into themes.

Table 9 *Items per Theme and Subthemes Prior to Focus Group and Post Focus Group Review*

			Pre-focus group (117 items)	Post-focus group (100 items)
DOMAIN	**Themes**		**Number of items**	
EMOTIONS				
Fear				
	God and Eschatology		21	12
	Prayer and Ritual		7	5
	Romance		6	4
	Jinn and Spirits		2	2
		total	**36**	**23**
Worry				
	God and Eschatology		10	8
	Prayer and Ritual		1	1
	Romance		2	2
	Jinn and Spirits		1	1
		total	**14**	**12**
Guilt				
	God and Eschatology		1	1
	Prayer and Ritual		13	8
	Romance		1	1
	Jinn and Spirits		0	0
		total	**15**	**10**
Shame				
	God and Eschatology		2	2
	Prayer and Ritual		4	3
	Romance		4	4
	Jinn and Spirits		0	2
		total	**10**	**11**
Sadness				
	God and Eschatology		3	3
	Prayer and Ritual		3	4
	Romance		1	2
	Jinn and Spirits		0	0
		total	**7**	**9**
Anger				
	God and Eschatology		0	3
	Prayer and Ritual		3	3
	Romance		2	2
	Jinn and Spirits		0	0
		total	**5**	**8**
COGNITIONS				
Religious core beliefs				
	Self		23	21
	Others		4	3
	World		3	3
		total	**30**	**27**

4.3 Phase 2: Testing of the Preliminary Questionnaire

4.3.1 Method

The 100-item questionnaire was presented to the group of participants described below before proceeding with Exploratory Factor Analysis (EFA). Given that the aim of the analysis was to identify latent constructs (hypothesised maladaptive religious schemata) and achieve parsimony in items used, rather than ascertaining outcome variables for indicators, Principal Axis Factoring was used (Fabrigar et al., 1999; Fabrigar & Wegener, 2012).

Participants

Undergraduate students (*N*=174) attending five general education classes at the same university in the Gulf took part in this stage of the study. Participation was invited through word-of-mouth by class instructors. The 174 participants who consented to proceed with the study produced complete responses and usable data. Students were awarded bonus points for entering the study portal. Importantly, participants did not need to consent to continuing to the questionnaire page of the portal, in order to receive these points (i.e., they were given credits for merely entering the portal). Although not conventional in the West, asking for gender in a binary format is the norm in Muslim countries, and hence this demographic variable was elicited in this manner. Also, gathering information about socioeconomic status was deemed important, given the apparent discrepancies in socioeconomic status and privilege among the different socioeconomic groups taking part in the study.

Eighty-two percent of the participants were female and 18% male, with the mean age of 20 years old (*SD* = 1.95). Ninety three point seven percent of participants were (GCC) nationals and 6.3% other. Eighty one point six percent described themselves as religious (at least to some degree) and 18.4 as being not religious. For the socioeconomic status of the sample and other demographics see table 10 below.

Table 10 *Participant Characteristic for Phase 2*

		Participants ***n* = 174**	
		Mean	**SD**
	Age	20	1.95
		%	***n***
Gender	Female	82	143
	Male	18	31

Table continues

Nationality	GCC	93.7	163
	Other Arab	4.6	8
	Other Muslim	1.7	3
Religiosity	Religious	31.6	55
	Somewhat religious	50	87
	Not religious	18.4	32
Socioeconomic status	Upper Class	5.7	10
	Upper middle Class	31.6	55
	Middle Class	56.9	99
	Lower-middle class	5.2	9
	Working class	0.6	1

Measures

Each version of the 100-item questionnaire at this stage consisted of two theoretically identified dimensions of religious schemata: Emotions and Cognitions. As previously noted, most of the items in each dimension were derived from qualitative interviews.

Emotions Dimension of the ReSQue

Six subscales measuring emotions associated with different aspects of salient Islamic beliefs and practices constituted the emotions dimension of the questionnaire. The six emotions are: *fear, worry, guilt, shame, sadness, and anger*. Each of these emotions was assessed in relation to four sub-dimensions*: God and Eschatology, Prayer and Ritual, Romance* and *Jinn.* For example, items such as: "*Growing up, I felt scared whenever I thought of God*" measured how the emotion of fear is related to perceptions of God. Other items measured how fear is related to Life After Death (Eschatology), Prayer and Ritual, Romance and Jinn. The other emotions were also assessed in this way. The fear emotion accounted for 23 items of the ResQue; worry for 12 items; guilt for 10 items; shame 11 items; sadness 9 items; and anger 8 items. All emotions included in this classification were emotions extracted from interview data.

Cognitions' Dimension of the ReSQue

The three religious core belief domains relating to *self*, *others* and the *world* constituted 27 items in total. These subscales gauged the influence of maladaptive religious beliefs on individuals' view of themselves, others, and the world.

As was the case with the Emotions subscale, each item on the cognitions subscale began with either "*Growing up I…*" or "*As an adult I…,*" then different beliefs were presented. For example: "*Growing up, I believed God saw me as a bad person."* Participants were asked to rate the extent to which they felt each statement described them using the same 6-point Likert scale as above.

Procedure

Both versions of the 100-item preliminary ReSQue were uploaded to the Qualtrics online survey platform. I then met all the participants online (in five groups), and verbally shared with them full information about the study and its wider context. I also gave the participants an opportunity to ask questions and seek clarifications. This format of personally presenting information about the questionnaire and allowing for ample opportunity to ask questions was deemed important, given the sensitive nature of the study. Both the childhood and adulthood versions of the questionnaire were available in two languages: Arabic and English. Participants selected the language format with which they were most comfortable. One hundred and seven of the participants completed the questionnaires in Arabic and 67 in English. Upon entry to the questionnaire portal, participants were presented with a welcome page in which summary information about the study was presented. They then entered a page where formal consent to take part in the study was sought. Those who decided not to consent exited the study at this point and are excluded from the final sample size. Participants who agreed to proceed completed a demographics form before receiving instructions on how to complete the questionnaires, followed by the questionnaire items themselves.

4.3.2 Results

Before reporting on the results of analyses, items 89 and 90 were discarded as they were found to be duplicates of items 77 and 80 respectively. These duplications were undetected in the earlier stage of the study.

Moreover, before conducting EFA, the data were screened for a number of statistical assumptions considered important for carrying out meaningful Factor Analysis (Fabrigar et al., 1999). First, the Shapiro-Wilk test of normality was run to determine normality of distribution. The Shapiro-Wilk test showed a non-significant departure from normality on both the childhood scale, W (174) = 99, p = .11 and the adult scale, W (174) = 99, p = .19 (thus suggesting that the data was acceptably normally distributed). Also, correlations were computed between responses to each item on both versions of the scale to determine any potential problems with collinearity. None of the correlations exceeded the >.9 threshold suggested by Hair et al. (2010) as indicating substantial collinearity. Subsequently, Principal Axis Factoring using SPSS version 26 was conducted on the remaining 98 items of each version of the questionnaire.

Exploring Factor Structure

The factor structure of the draft 98 item childhood and adult questionnaires were explored using data from all 174 participants. The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analyses (.86 for the childhood scale, and .84 for the adult scale) at this stage of the analysis with

Bartlett's Test of Sphericity being significant (p <.001) for both scales. An Oblique Promax rotation was initially performed in order to determine the degree to which factors were correlated and thus identify the most appropriate rotation method (Hinkin et al., 1997). The factor correlation matrix showed no strong correlations between factors on either scale. It was therefore decided that Varimax orthogonal rotation be deployed.

As well as initially consulting the scree plot, a web based Parallel Analysis (PA) engine (https://analytics.gonzaga.edu/parallelengine/) based on Patil et al. (2008) was used to determine the number of factors to be retained (Hayton et al., 2004). PA suggested the retention of 9 factors in the childhood scale and 6 factors in the adult scale. However, on inspection, factors 8 and 9 on the childhood scale only had 2 items in them each, and based on Russell's (2002) recommendations that at least 3 items per factor are advisable in EFA, the decision was made that only 7 factors in the childhood scale be retained initially (however the 7th factor was later dropped given no items were indicated in it following a number of reruns). Six factors suggested during the PA in the adult scale were retained.

A high degree of multi-collinearity was observed in the determinant statistic of both correlation matrices during the first course of analyses (childhood determinant = 7.70*e^{40} and adulthood determinant = 5.9*e^{40}). This issue was resolved following a number of the iterations described below.

First, 19 items from the C-ReSQue and 21 from A-ReSQue which had a factor loading of < .4 (Hinkin et al., 1997) were removed, then the analysis was rerun. Subsequently, 10 items from C-ReSQue, and 8 from A-ReSQue with cross-loadings of > 75%, starting with the absolute maximum loadings on all factors were discarded, and analysis re-computed. Finally, after careful examination of the items, and opting for a compromise between theoretical and statistical considerations, the top three loading items in each factor of the childhood scale were retained, leaving a total of 18-items for this version of the ReSQue. For the adult scale, at times items with slightly less than top three loading were selected for retention for theoretical reasons, and to approximate symmetry with the C-ReSQue as much as possible. The A-ReSQue also resulted in an 18-item scale. The final item selection showed a high degree of symmetry (although not perfect) between both versions of the scale (i.e., both versions had the same factor structure with very similar items in each factor). See Table 11.

In the final analysis, the childhood questionnaire (C-ReSQue) comprising six factors (3 items in each) explained 74.5% of the variance in the data and demonstrated no issues with multi-collinearity (determinant = <.001). The adult scale (A-ReSQue) also had no problems with multi-collinearity (determinant = .000) at this final stage, and explained 75% of the variance. The Kaiser Meyer Olkin

Index for the childhood and adult 6-factor model scales were .79 and .81 respectively ($P < .001$), indicating adequate sampling. The average communality for the childhood scale was .62 and for the adult scale .63. The inter-item reliability on all 6 factors for both scales was good, with Cronbach's $\alpha > 0.7$.

Based on the item themes in the six factors of both versions of the ReSQue, factors were labelled as follows: a) Theocentric Core Beliefs (how an individual believes God sees them); b) Theophobia (fear motivated religious observance); c) Eschatological Anxiety (fears of what will happen to a person after death); d) Religious Obligations Distress (distress as a result of not fulfilling perceived religious obligations); 5) Forbidden Love (negative emotions associated with having perceived elicit romantic feelings); 6) Theocentric Conditional Beliefs (the belief that God's love is conditional). The 18 items for each version of the ReSQue, shown in Table 11, were therefore adopted to be tested in a confirmatory stage of analysis using a new sample.

Table 11 *Preliminary Model with Factors, Items, and Factor Loadings*

Factor name	**Childhood scale Item** C-ReSQue *(Total variance explained = 74.5%)*	Factor Loading	**Adult scale Item** A-ReSQue *(Total variance explained = 75%)*	Factor Loading
Theocentric core beliefs	Q81) Growing up, I believed God saw me as a bad person.	.82	Q88) As an adult, I believe God is disappointed in me.	.83
	Q88) Growing up, I believed God was disappointed in me.	.82	Q81) As an adult, I believe God sees me as a bad person.	.79
	Q92) Growing up, I believed I was a bad Muslim and this upset me.	.78	Q80) As an adult, I believe God sees me as a sinner.	.78
Theophobia	Q4) Growing up, I was reminded (by others) more about God's punishment than His mercy.	.66	Q16) As an adult, I avoid thoughts about praying because of the fear they induce in me.	.65
	Q3) If I'm honest, growing up, the fear of God, more than the love of God, directed my behaviour.	.60	Q5) As an adult, I perform religious duties more to avoid the punishment of God than because of the pleasure I experience in them.	.64
	Q6) Growing up, I was more aware of hell than heaven.	.56	Q14) As an adult, I pray more out of fear than faith.	.60
Eschatological anxiety	Q28) Growing up, I worried that when I died I would go to hell.	.59	Q27) As an adult, I worry a lot about what will happen to me in the grave.	.77
	Q27) Growing up, I worried a lot about what would happen to me in the grave.	.65	Q29) As an adult, I worry a lot about what will happen to me in the hereafter.	.71
	Q29) Growing up, I worried a lot about what would happen to me in the hereafter.	.63	Q30) As an adult, I worry about what will happen to me on the day of judgment.	.66

Religious Obligations Distress	Q60) Growing up, I felt bad about myself when/if I didn't pray on time Q59) Growing up, I felt empty inside when I didn't perform my prayers on time. Q58) Growing up, I felt sad when I felt disconnected from God.	.84 .77 .78	Q60) As an adult, I feel bad about myself when/if I don't pray on time. Q37) As an adult, I feel guilty when I don't pray on time. Q49) As an adult, I feel ashamed of myself for doing something religiously forbidden, even if no one knows about it.	.85 .77 .71
Forbidden love	Q52) Growing up, I felt very ashamed when I had romantic feelings towards someone (even if I didn't act on them). Q32) Growing up, I worried whenever I had any romantic feelings (even if I didn't act on them). Q17) Growing up, I believed that I would be punished in hell for having romantic feelings even if I didn't act on them.	.76 .76 .70	Q71) As an adult, I feel angry with myself for having romantic feelings towards someone. Q52) As an adult, I feel very ashamed when I have romantic feelings towards someone (even if I don't act on them). Q32) As an adult, I worry whenever I have romantic feelings (even if I don't act on them).	.77 .75 .71
Theocentric Conditional Beliefs	Q95) Growing up, I believed God is angry with those who don't follow Islam Q94) Growing up, I believed God only loved those who follow Islam. Q84) Growing up, I believed that how good you were depended on whether you prayed and read the Quran or not.	.68 .69 .62	Q84) As an adult, I believe that how good you are depends on whether you pray and read the Quran or not. Q95) As an adult, I believe God is angry with those who don't follow Islam. Q86) As an adult, I believe that if you don't pray, you are a bad person, period.	.64 .61 .56

4.4 Phase 3: Testing the Religious Schema Questionnaires

4.4.1 Method

A new sample of university students were given both versions of the ReSQue to complete with Confirmatory Factor Analyses (CFA) used to analyse resulting data, in order to verify the factor structure of the models described above. Additional measures, namely depression and anxiety questionnaires, and an Islamic obligations subscale from another measure, were administered to establish convergence with the neurotogenic aspects of the ReSQue. Furthermore, a Punishing Allah

subscale and Religious Exclusivism subscale were used to assess for divergent validity. Finally, during this stage, a sample of participants from stage two of the study were asked to complete the shortened version of the ReSQue to examine temporal reliability of the final ReSQue items over a one-month timescale.

Participants

Two hundred and fifty individuals participated in this stage of the study. All participants were students from the same university in the Gulf as the first sample. The students were recruited from different colleges within the university, with the vast majority being enrolled in first year general education courses in psychology and creative and innovative thinking skills at the time of participation. They were all recruited through word of mouth by their lecturers. Demographic data showed that 78.4% of those who took part in the study were female and 21.6% male; with the mean age for the whole sample being 20.6 year (SD = 2.20; range = 18 – 33). Ninety point eight percent of participants were Gulf Cooperation Council (GCC) nationals and 9.2% other. Seventy-nine point two percent described themselves as religious (to at least some degree), and 20.8% as being not religious (table 12).

Of the 174 participants who completed the C-ReSQue and A-ReSQue for the initial exploratory factor analysis, 117 completed the shorter version of the ReSQue a second time, a month after completing the first. However, data from only 71 participants was useable due to insufficient identifiers given to allow for matching. Table 12 shows the demographic constitution of the test-retest. A description of the time one sample is also given to allow for comparisons between samples at time one and samples at time two.

Table 12 *Participant Characteristics for Phase 3 of and Both Test and Retest Reliability Analysis*

		Participants (Confirmatory stage - CFA) ***n* = 250**		**Participants (test-retest reliability – time 1)** ***n* = 174**		**Participants (test-retest reliability – time 2)** ***n* = 71**	
		Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
	Age	21	2.19	20	1.95	21	1.56
		%	***n***	**%**	***n***	**%**	***n***
Gender	Female	78.1	196	82	143	90.1	64
	Male	21.5	54	18	31	9.9	7
Nationality	GCC	91.2	228	93.7	163	94.4	67
	Other Arab	5.2	13	4.6	8	4.2	3
	Other Muslim	3.6	9	1.7	3	1.4	1
Religiosity	Religious	29.6	74	31.6	55	25.4	18
	Somewhat religious	49.6	124	50	87	49.3	35
	Not religious	20.8	52	18.4	32	25.4	18
Socioeconomic status	Upper Class	4.8	12	5.7	10	2.8	2
	Upper middle Class	30.4	76	31.6	55	35.2	25
	Middle Class	60.4	151	56.9	99	53.5	38
	Lower-middle class	3.2	8	5.2	9	7	5
	Working class	1.2	3	0.6	1	1.4	1

Measures

ReSQue

As detailed above, following exploratory factor analysis, each version of the ReSQue consisted of six factors based on both the preceding exploratory factor analysis and theoretical considerations, with each subscale containing three items (thus making the total number of items per scale = 18). Both versions of the subscales (childhood and adult) are identical in name and the underlying constructs, but differ slightly in the wordings of some of the items. Each subscale within the two versions of the ReSQue is presumed to measure an aspect of maladaptive religious schemata: *Theocentric Core Beliefs* (individuals' beliefs about God's perception of them); *Theophobia* (the fear of divine punishment); *Eschatological Anxiety* (worries about the afterlife); *Religious Obligations Distress* (distress caused by

not fulfilling religious duties); *Forbidden Love* (worries associated with perceived illicit romantic feelings); and *Theocentric Conditional Beliefs* (belief that divine acceptance and love is conditional). The scoring scale for each version of ReSQue of the 18-items is a 6- point Likert scale ranging from 1 (completely untrue of me) to 6 (completely true of me).

PHQ-9 (Screening Questionnaire for Depression)

The Patient Health Questionnaire, PHQ-9 (Kroenke et al., 2001) is a commonly used screening tool for depression in both academic research and clinical practice. The scale displayed high internal consistency (Cronbach's alpha = .86 and. 89) in the original Kroenke et al. (2001) study; with test-retest reliability (*r* = .84)also described as excellent by the authors.

Importantly, the measure has been shown to be valid and reliable (Cronbach's alpha of 0.86) when used with a Gulf Arab sample (AlHadi et al., 2017). The questionnaire asks participants to choose statements that best describe how they have been feeling over the preceding two-week period. The statements capture typical depressive symptoms (e.g., "feeling down, depressed, or hopeless," "having little pleasure in doing things," etc.). Each item is scored on a 4-point scale ranging from 0 (not at all) to 3 (nearly every day). The overall score for the questionnaire is obtained by simply adding up all the individual item scores. A total score of between 0-5 indicates no depression symptoms; 5-9 suggests mild symptoms of depression; 10-14, moderate; 15-19, moderately severe; and 20-27, severe.

GAD-7 (Screening Questionnaire for Anxiety)

The Generalised Anxiety Disorder questionnaire (GAD-7; Spitzer et al., 2006) is also a commonly used to screen for anxiety symptoms. In a Gulf Arab sample, AlHadi et al. (2017) found that the GAD-7 reliability was adequate with a Cronbach's alpha ($\alpha = 0.76$).

The GAD-7 comprises seven items that measure symptoms of anxiety. As with the PHQ-9, participants respond to each statement by indicating to what extent they had been experiencing a particular problem over the preceding two weeks. Examples of difficulties include: a) "feeling nervous, anxious or on edge;" b) "not being able to stop or control worrying;" and c) "worrying too much about different things." The scoring Likert scale for each statement ranges from 0 (not at all) to 3 (nearly every day). A total score of 0-5 indicates no anxiety; 6-10 suggest mild symptoms; 11-15 moderate symptoms; and 16-21 indicate severe symptoms of anxiety.

The Psychological Measure of Islamic Religiousness (PMIR)

The Psychological Measure of Islamic Religiousness (Abu-Raiya et al., 2008) is a 60-item scale designed for use in research on the relationship between Islamic religiousness and mental health (Abu-Raiya et al., 2008). The scale comprises the following subscales: Islamic Beliefs (5 items); Islamic Ethical

Principles & Universality (14 items); Islamic Religious Conversion (6 items); Islamic Positive Religious Coping & Identification (12 items); Punishing Allah Reappraisal (3 items); Islamic Religious Struggle (6 items); Islamic Religious Obligation (5 items); and Islamic Exclusivism (4 items).

According to Abu-Raiya et al. (2008) the PMIR can be used both as a generic measure of Islamic religiousness or by employing relevant subscales independently utilised to assess specific dimensions. For the purposes of testing for convergent validity, only the Islamic Obligations (IO) subscale (5 items) was used. Example items in this subscale include: "I *read the Holy Quran because I would feel guilty if I did not.*" For divergent validity of the ReSQue, the following subscales were used: 1) Punishing Allah Reappraisal (PAR) subscale (3 items), example item: "*When I face a problem in life, I wonder what I did for Allah to punish* me;" and Islamic Exclusivism (IE) subscale (4 items), with items such as: *"Of all the people on this earth, Muslims have a special relationship with Allah because they believe the most in His revealed truths and try the hardest to follow His laws."*. All subscales were obtained directly from the authors of the PMIR via email.

Procedure

The two 18-item versions of the ReSQue were scripted on to the Qualtrics online platform. Information about the overall project and this particular study were again shared in person via the university's electronic blackboard Class Collaborate Ultra (an online virtual classroom) with all 250 participants. Extra time was allocated to questions and queries. Upon consenting to taking part in the study participants first completed demographic information and then proceeded to complete the battery of five measures in the following order: PHQ-9; GAD-7; C-ResQue; A-ReSQue, PMIR subscales.

Finally, 117 participants from the first factor analysis were also asked to complete both versions of the ReSQue in order to examine test-retest reliability. The same Qualtrics platform was used to deliver the questionnaires.

4.4.2 Results

Maximum likelihood with robust standard errors (MLR) was used to estimate model parameters. Goodness-of-fit of the CFA models was tested using the following criteria : RMSEA ≤ 0.06 (90% CI ≤ 0.06), CFI ≥ 0.95, and TLI ≥ 0.95 (Hu & Bentler, 1999). The chi-square/df ratio ≤ 3 rule (Kline, 2016; Kyriazos et al., 2018) was also applied as a criterion for model fit.

A model for each version of the scale identified in the previous stage of the study was tested. For the childhood scale, indicators of model fit supported the proposed model (X^2 = 238.38, *df* = 120, Chi/df = 1.99, $p < 0.01$. RMSEA = 0.06 (90% CI [0.051, 0.074]), CFI = 0.94, TLI = 0.92). Although the CFI and TLI

were not ≥ 0.95, Hu & Bentler (1999) recommend values close to .95 are acceptable. See Figures 4 and 5, and Table 13 for factor structure and loadings. The Adult scale showed good model fit (X^2 = 216.90, *df* = 120, Chi/df = 1.81, $p < 0.01$. RMSEA = 0.06 (90% CI [0.045, 0.069]), CFI = 0.97, TLI = 0.95), thus ultimately allowing for the adoption of the models for both versions of the ReSQue.

The final 6-factor (18-item) questionnaires were therefore confirmed with this sample. The questionnaire confirms the six possible components of a maladaptive religious schema: a) Theocentric core beliefs; b) Theophobia; c) Eschatological Anxiety; d) Religious Obligations Distress; e) Forbidden Love; and f) Theocentric Conditional Beliefs. Higher scores on each subscale indicate the salience of the particular aspect of the religious schema being measured.

Figure 3 *Confirmatory Factor Analysis Model for C-ReSQue*

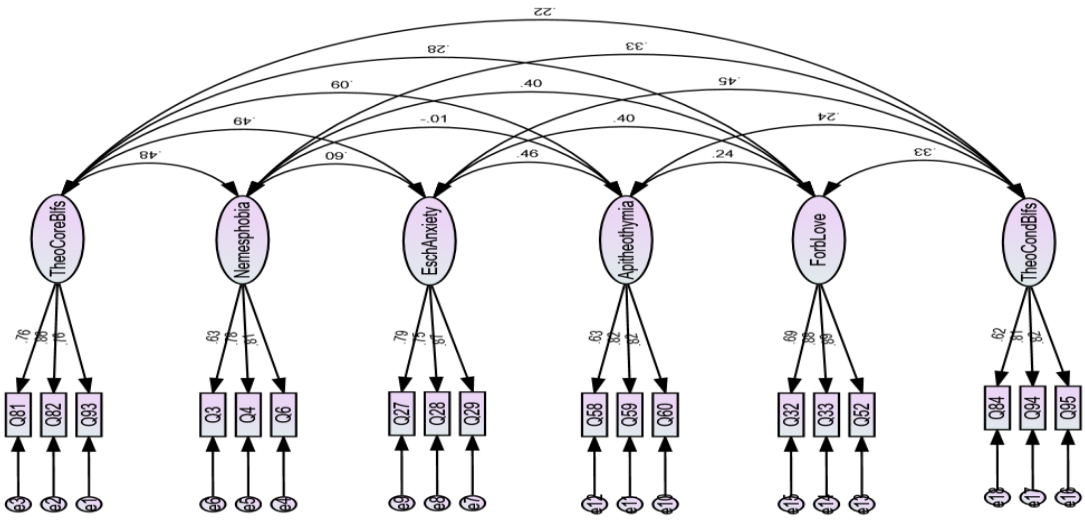
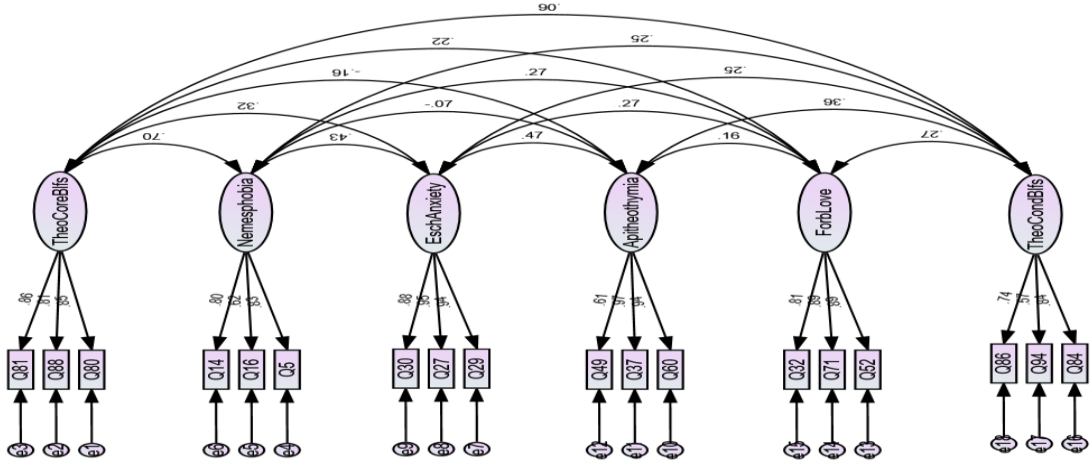


Figure 4 *Confirmatory Factor Analysis Model for A-ReSQue*



Reliability Analyses

Internal Consistency

Each version of the 18-item scale and their individual factors were internally consistent based on Cronbach alpha (α) reliability statistics (see Table 13).

Table 13 *Factor Loading for Each Item and Cronbach's α Value from CFA*

Scale Version	Factor	Factor loading *(item number in scale)*			Cronbach's α
C-ReSQue					
	Theocentric core beliefs	.76 *(1)*	.80 *(2)*	.76*(3)*	.83
	Theophobia	.63 *(4)*	.78 *(5)*	.81 *(6)*	.78
	Eschatological anxiety	.79 *(7)*	.75 *(8)*	.87 *(9)*	.84
	Apitheothymia	.63 *(10)*	.82 *(11)*	.82 *(12)*	.79
	Forbidden love	.69 *(13)*	.88 *(14)*	.89 *(15)*	.86
	Theocentric Conditional Beliefs	.62 *(16)*	.81 *(17)*	.82 *(18)*	.79
A-ReSQue					
	Theocentric core beliefs	.86 *(1)*	.81 *(2)*	.85 *(3)*	.88
	Theophobia	.80 *(4)*	.62 *(5)*	.83 *(5)*	.79
	Eschatological anxiety	.88 *(7)*	.95 *(8)*	.94 *(9)*	.95
	Apitheothymia	.61 *(10)*	.97 *(11)*	.94 *(12)*	.87
	Forbidden love	.81 *(13)*	.89 *(14)*	.89 *(15)*	.90
	Theocentric Conditional Beliefs	.74 *(16)*	.57 *(17)*	.84 *(18)*	.76

Test-Retest Reliability

The 18-item C-ReSQue demonstrated good (Cicchetti, 1994) temporal reliability for the total scale (ICC = .82 [.718, .890], *p*<.001). All six C-ReSQue subscales showed fair (Cicchetti, 1994) test-retest reliability (ICC = range .69 - .79, *p*<.001).

The A-ReSQue demonstrated fair temporal reliability for the total scale (ICC = .77 [.50, .88], *p*<.001). Although the Theophobia subscale showed lower levels of temporal reliability (ICC = .48 [.17, .67] *p*<.001), all the other five subscales demonstrated good test-retest reliability (ICC = range .73 - .78, *p*<.001).

Validity Analyses

Convergent Validity

Clinical Measure: PHQ9 and GAD7

The **C-ReSQue** exhibited significant correlations with the PHQ-9 (r = .37, p < .001) and the GAD-7 (r = .33, p < .001), suggesting that the measure captures depression and anxiety related constructs (neurotogenic components). Furthermore, all but the Theocentric Conditional Beliefs subscale of the C-ReSQue showed significant correlations with the PHQ-9, ranging from r = .19, p < .01, to r = .36, p < .001. Finally, all C-ReSQue subscales demonstrated significant correlations with GAD-7, ranging from r = .13, p < .05, to r = .33, p < .001.

The **A-ReSQue** also displayed significant correlations with the PHQ-9 (r = .29, p < .001) and the GAD-7 (r = .28, p < .001), further confirming convergent validity with clinical variables. Additionally, all but the Religious Obligations Distress and Theocentric Conditional Beliefs subscales recorded significant correlations with the PHQ-9 ranging from r = .19, p < .01, to r = .40, p < .001. Similarly, A-Theocentric Core Beliefs (r = .35, p < .001), A-Theophobia (r = .31, p < .001), and A-Eschatological Anxiety (r = .32, p < .001) subscales all exhibited statistically meaningful correlations with the GAD-7, suggesting these particular subscales were important in capturing anxiety, inducing maladaptive beliefs in adulthood.

Islamic Obligations (PMIR-IO):

A significant correlation was observed between the **C-ReSQue** and PMIR-IO (r = .15, p < .05). Likewise, particularly C-Theophobia (r = .15, < .05) and the C-Forbidden love (r=.20, P< .01) showed a significant correlation with the PMIR-IO. These results indicate some overlap between the C-ReSQue and two of its subscales with the PMIR-IO subscale.

Notably, stronger correlations were observed between the **A-ReSQue** and PMIR-IO (r = .36, p < .01) indicating that the adult version of the measure is more reflective of the negative emotional aspects

of religious obligations. Moreover, all but the A-Eschatological Anxiety subscale of the A-ReSQue demonstrated significant correlations with the PMIR-IO. Specifically, A-Theophobia (*r*=.30, *P*<.01), A-Religious Obligations (*r*=.21, *P*<.01), A-Forbidden love (*r*=.25, *P*<.01), A-Theocentric Conditional beliefs (*r*=.26, *P*<.01) showed the stronger correlations, while Theocentric Core Beliefs (*r*=.134, *P*<.05) exhibited a lower correlation coefficient.

Divergent Validity

Divergent Validity: Correlations with PMIR Subscales

For divergent validity, C-ReSQue and its subscales showed non-significant correlations with PMIR-PAR and PMIR-IE, supporting their discriminant validity. However, the A-ReSQue showed significant correlation with indices of punishing God reappraisals, the PMIR-PAR (*r* = .30, *P* < .01), and Islamic exclusivism, PMIR-IE (*r* = .22, *P* < .01).

Moreover, a significant correlation was shown between the A-Eschatological Anxiety and PMIR-PAR (*r* = .30, *P* < .01). However, most of the remaining A-ReSQue subscales exhibited weak correlations with the PMIR-PAR (*r* = .13 to .22, *p* < .01 to *p* < .05), with A-Theocentric Core Beliefs showing a non-significant relationship. These results indicate some overlap between the PMIR-PAR and PMIR-IE with adult maladaptive religious beliefs. Lastly, A-Eschatological Anxiety (*r* = .19, *P* < .01); A-Religious Obligations Distress (*r* = .21*, p* < .05), and A-Theocentric Conditional beliefs (*r* = .22*, p* < .01) correlated significantly with PMIR-IE; while A-Theocentric Core Beliefs, A-Theophobia, and A-Forbidden Love had non-significant correlations with the PMIR-IE.

Table 14 *Correlations Between Both Versions of the ReSQue and Their Subscales and Both Convergent and Divergent Validity Measures*

	Convergent validity			**Divergent validity**	
	PHQ9	GAD7	PMIR-IO	PMIR - PAR	PMIR- IE
C-ReSQue	**.37*****	**.33*****	.15*	.12	-.03
C-Theocentric. Core Beliefs	**.33*****	.23***	-.00	-.02	-.09
C-Theophobia	**.28*****	.20***	.15*	.09	-.12
C-Eschatological Anxiety	**.30*****	**.29*****	.04	.08	-.04
C-Religious Obligations Distress	.19**	.17**	.06	.10	.08
C-Forbidden Love	**.36*****	**.31*****	.20**	.10	-.013
C- Theocentric Conditional Beliefs	.095	.13*	.12	.11	.08
A-ReSQue	**.29*****	**.28*****	**.36****	**.30****	.22**
A-Theocentric. Core Beliefs	**.40*****	**.35*****	.13*	.09	.00
A-Theophobia	**.29*****	**.31*****	**.30****	.13*	.09
A-Eschatological Anxiety	**.28*****	**.32*****	.12	**.26****	.19*
A-Religious Obligations Distress	-.00	.03	.21**	.18**	.21**
A-Forbidden Love	.19**	.07	**.25****	.17**	.05
A- Theocentric Conditional Beliefs	-.04	.04	**.26****	.22**	.22**

*** correlation significant following Bonferroni adjustment (two tailed); **correlation significant at *<.01 (two tailed) *correlation significant at *<.05 (two tailed).

4.5 Discussion

The present study aimed to develop and validate a measure of religious schema, the Religious Schema Questionnaire (ReSQue), designed to measure neurotogenic religious schemata within a Muslim context. The impetus for this study stemmed from the recognition of a notable gap in the field. While the relationship between religious beliefs and mental health is well-documented, especially among Christians (see chapter one), few instruments exist that assess for unhelpful cognitive representations of beliefs held specifically by conservative indigenous Muslims populations.

The approach taken in the current study was to first conduct detailed interviews from which adjectives and phrases were used to construct a comprehensive pool of questionnaire items. The initial EFA with 174 participants identified a six-factor solution for both childhood (C-ReSQue) and adult (A-ReSQue) versions, which were later confirmed by CFA. The six-factor solution, involving 250 participants, encompassed a range of religious schema domains including Theocentric Core Beliefs, Theophobia, Eschatological Anxiety, Religious Obligations Distress, Forbidden Love, and Theocentric Conditional Beliefs.

Internal consistency of the measure, assessed via Cronbach's alpha, showed satisfactory to excellent reliability for both versions' total scale score and all individual factors. This consistency supports the measure's reliability and homogeneity of items within each subscale. Moreover, both versions of the ReSQue demonstrated fair to good temporal reliability, as indicated by test-retest ICC values, suggesting the measure produces stable results over time - an important feature for tracking changes in religious schemata.

A two-pronged approach to validity testing was pursued because it was important to test the extent to which both versions of the measure were sensitive to the neurotogenic aspects of maladaptive beliefs beyond the beliefs themselves. To achieve this, depression and anxiety measures (PHQ-9 and GAD-7) were used alongside the PMIR (Abu-Raiya et al., 2008) Islamic Obligations subscale. The PMIR-IO subscale, unlike the other two PMIR subscales (used to measure Divergent validity), explicitly includes items that contain emotion adjectives. The other two subscales contain items that elicit negative religious beliefs without explicit mention of associated emotion. The aim was to ascertain whether both version of the ReSQue captured the neurotogenic aspects of beliefs.

The overall trends in the complex results showed the following: Both the C-ReSQue and A-ReSQue total scores correlated with both mental health measures and the PMIR-IO subscale. Indicating the ReSQue measures are indeed capturing the neurotogenic aspects of religious beliefs. Furthermore,

almost all the C-ReSQue subscales show significant convergence of the PHQ-9 and GAD-7, while four (of six) of the A-ReSQue subscales correlate with the PHQ-9, and three with the GAD7.

Three of the C-ReSQue subscales correlate with the PMIR-IO subscale, while neither the C-ReSQue total nor any of its subscales significantly overlapped with the PMIR-PAR or PMIR-IE subscales that only elicit negative beliefs. These results seem to indicate that the C-ReSQue and some of its subscales are more sensitive to neurotogenic maladaptive beliefs than maladaptive beliefs alone.

Finally, although significant associations were observed between the A-ReSQue and both the PMIR-PAR and PMIR-IE (measures used for divergent validity), stronger correlations were observed between the A-ReSQue and its various subscales with the PMIR-IO. These analyses suggest that, despite some overlap with the indices of "Punishing Allah" (PMIR-PAR) and "Islamic Exclusivism" (PMIR-IE), the A-ReSQue demonstrates a stronger relationship with the PMIR-IO. This indicates that the A-ReSQue is more sensitive to the neurotogenic aspects of maladaptive beliefs, while also capturing maladaptive beliefs alone.

The finalized ReSQue is an 18-item scale that incorporates six elements of maladaptive religious schemata described above. This model of religious schema aligns well with the qualitative findings of the study reported in the previous chapter, as it contains the main components of the maladaptive religious schema discovered following the analysis of the in-depth interview data. The model also conforms with established psychological constructs, such as Early Maladaptive Schemata (Young et al., 2003, 2006). Moreover, it resonates with the symptomatology of religiously themed neurotogenic beliefs, which are often overlooked in existing measures, especially in Muslim contexts (Amer, 2021). This alignment underscores the potential of the ReSQue as a nuanced tool for identifying maladaptive religious schemata and could contribute to improving our understanding of aspects of psychological distress experienced by some Muslims.

4.6.1 Limitations

Nevertheless, despite these promising findings, several methodological limitations should be acknowledged. First, the sample size for the initial study was smaller than the recommended sample-to-item ratio of a minimum of 5-to-1 (Gorsuch, 1983; Suhr, 2006). The relatively small sample in phase two (i.e., testing of the preliminary questionnaire) of the study was influenced by the fact that the questionnaire contained highly sensitive questions that could potentially cause distress to some individuals due to the possibly challenging nature of questions about religion. So, the decision was made to limit the number of participants exposed to the items on the scale as much as possible, with

hope that if later the items were found to be acceptable to the populations, that the confirmatory analysis stage would address this issue. Indeed, a second and sufficiently adequate sample was used, which confirmed the factor structure and model fit. Furthermore, the corrected item-total correlation (between items within factors) was generally strong, >.45 to .86. It is hoped these two subsequent findings help to address the sampling issue.

Second, the convergent validity of the ReSQue was supported by its correlation with PHQ9 and GAD7 and PMIR-IO, and discriminate validity by its relative divergence from the PMIR-PAR and PMIR-IE subscales. Here again, the number and type of questionnaires used in the study was determined by the sensitivity of the study. So, only the absolute minimum number of scales were deemed justifiable during this exploratory phase of work on conservative Muslim religious beliefs. Future research should explore the ReSQue's relationship with other measures of religiousness, spirituality, and psychological functioning to obtain a more comprehensive understanding of its convergent and discriminant validity.

Third, the measure's validation involved predominantly UAE-based Muslim individuals, which may limit the generalizability of the findings to other cultural or geographic contexts. Islam, as practiced and understood, varies widely across cultures; therefore, future studies should aim to validate the ReSQue across different cultural contexts within the Muslim world.

Fourth, the current study focused solely on the maladaptive aspects of religious schemata. While these schemata are crucial for understanding psychological distress, it is equally important to understand functional religious schemata that may provide psychological resilience. Future research could aim to expand the ReSQue or develop parallel measures to assess these positive cognitive structures.

Fifth, the absence of a clinical sample in the current study limits our understanding of the relationship between maladaptive religious schemata and psychopathology. Future research should aim to validate the ReSQue in clinical populations and investigate its utility in predicting various mental health outcomes.

Lastly, an investigation into the broader socio-cultural factors influencing the formation and development of religious schemata should be carried out. This would be very helpful, not least because it allows for a distinction to be made between those cognitive representations that have a cultural aetiology (even if manifested as religious schemata) from those that are purely religious in nature and origin.

4.6.2 Utility of ReSQue in Research and Practice

Despite these limitations, the development of the ReSQue represents a step forward in the study of religion and mental health within a Muslim context. It is one of the few measures designed specifically for a conservative Muslim population. This effort is in line with calls for more culturally sensitive assessment tools (Housen et al., 2018). It is also particularly important given that previous prevalence data seems to suggest an overrepresentation of mental disorder among certain Muslim populations (see chapter one, section 1.1.8).

The availability of this tool opens new avenues for exploring the complex dynamics of religious beliefs in relation to mental health. Clinicians can use the ReSQue to assess and address religious schemata that may be contributing to psychological distress in their religious Muslim clients. By addressing these schemata in therapy, clinicians can provide more culturally competent care and potentially enhance treatment outcomes. This again aligns with the growing recognition of the importance of integrating clients' religious beliefs and practices in psychotherapy (Rosmarin, 2018).

Moreover, the ReSQue can be instrumental in research, allowing for more precise investigation into the role of religion in psychological wellbeing and distress. For instance, future research could examine the interplay between religious schemata and various psychopathologies, or how these schemata might mediate or moderate the relationship between religiosity and mental health outcomes. In fact, the ReSQue is currently being utilized in research conducted by a DClinPsych student at the University of Oxford. This research is investigating the relationship between maladaptive religious schemata and PTSD among Muslim refugees in the UK.

Future studies could also investigate the development and evolution of these schemata over time, providing insights into how religious upbringing, experiences, and practices shape religious schemata across different stages of life. Such research could inform prevention and intervention efforts, guiding the development of religiously-informed psychotherapies or early prevention programs.

Finally, the measure could be employed in investigating the broader social and cultural factors that influence the formation and manifestation of these schemata. For example, how do societal norms, religious institutions, and so on, affect the development of maladaptive religious schemata? Addressing these questions could provide a more comprehensive understanding of the socio-cultural determinants of mental health within Muslim populations.

In sum, the Religious Schema Questionnaire (ReSQue) offers a promising tool for advancing the study of religion and mental health within a Muslim context. By facilitating a deeper understanding of the complex interplay between religious schemata and psychological wellbeing, the ReSQue can contribute to more culturally sensitive research, clinical practice, and mental health promotion efforts.

CHAPTER 5: Exploring the Impact of Maladaptive Religious Schema on Mental Health in a Muslim Sample: Focus on Depression and Anxiety

5.1 Introduction

The preceding chapter described the development of a measurement tool designed to identify and assess maladaptive religious schemata among a Muslim population. Two versions of the instrument were developed: The Childhood Religious Schema Questionnaire (C-ReSQue) and the Adult Religious Schema Questionnaire (A-ReSQue). These instruments are designed to detect both the presence and intensity of particular maladaptive representations of religious beliefs. The measures provide an overall score for each version of the tool, with higher scores indicating the presence of a maladaptive religious schema. Additionally, both instruments yield scores for each of six subscales enabling a more nuanced insight into the nature of specific subschemata for the individual.

Previous chapters have also presented and summarised the schema construct and provided the operational definition used in the current thesis for a religious schema construct based on existing theory and empirical research (refer to chapter one, section 1.2.3.4, p. 33 for the definition). Therefore, these important aspects will not be reintroduced further. However, although discussed at some length in chapter one, research on maladaptive religious beliefs and mental health will be summarised below in order to provide the rationale and context for the current study.

5.1.1 Maladaptive Religious Beliefs- a Brief Review of Previous Research

A common approach across a large number of empirical studies which examined the relationship between religious beliefs and mental disorders has involved conceptualising certain religious cognitions and experiences as negative religious coping and religious struggle (see chapter one). Negative Religious Coping (NRC) refers to maladaptive strategies that "reflect underlying spiritual tensions and struggles within oneself, with others, and with the divine" (Pargament et al., 2011, p. 51). Importantly, NRC as operationalised through the Religious Coping Scale (RCOPE (Pargament et al., 2000) or brief RCOPE (Pargament et al., 2011), is expressed via negative and unhelpful cognitive appraisals (Grey et al., 2023) of perceived relationships with God, religious intuitions, the devil, and other religious people. Similarly, the Religious Struggle Scale (Exline et al., 2014) includes items assessing for Divine Struggle, Demonic, Interpersonal, Moral, Ultimate Meaning, and struggles with religious doubt dimensions. Both these measures have been extensively used to study the relationship between negative religious beliefs and psychological disorders. For example, several studies have shown an association between higher levels of negative religious coping and greater psychological distress, including depression and anxiety, among both Western (e.g., Ano & Vasconcelles, 2005; McConnell et al., 2006) and non-Western populations (e.g., Francis et al., 2019; Voytenko et al., 2023).

However, studies exploring the relationship between negative religious beliefs and mental health among Muslims are limited in both number and scope (Abu-Raiya et al., 2018), with those published seeming to confirm findings of studies with other religious communities. Many of these studies have used the RCOPE or an adaptation of this scale (Abu-Raiya et al., 2018). For example, In New Zealand, Gardner et al. (2014) found that NRC was associated with increased stress among domestic Muslim university students.

In Muslim majority countries, similar results have been reported. Ai et al. (2003), for example, reported that religious struggle predicted more severe trauma responses among Muslim refugees from Kosovo and Bosnia. Religious struggle was also associated with depressed mood among a large web-based international Muslim sample (Abu Raiya et al., 2008). Of the very few studies that use a measure specifically developed with a Muslim sample (i.e., the Islamic Religious Struggle sub-subscale of the Psychological Measure of Islamic Religiousness, the PMIR; Abu Raiya et al., 2008), Ghorbani et al. (2013) found that self-reported religious struggle was associated with greater perceived stress and lower levels of self-esteem among Iranians.

Investigating the implications of religious struggle among a Palestinian Muslim population, Abu-Raiya et al. (2015) found that symptoms of both depression and anxiety were both predicted by punitive cognitions (appraisals that involve being punished or attacked by God or demons) and ultimate meaning struggles. In another study with a multi-national Muslim sample, Abu-Raiya et al. (2018) found that although low levels of religious struggle were reported by the sample as a whole, Turkish participants reported significantly higher religious struggle scores than both Malaysian and Palestinian participants. Conversely, higher levels of generalised anxiety were correlated with scores indicative of higher religious struggle among Malaysians only. The pioneering work of Abu-Raiya and colleagues serves to demonstrate that the relationship between religious struggle and psychological disorders among Muslims may be a complex one.

The general conclusions based on existing research on the relationship between maladaptive religious beliefs and mental disorders among Muslim populations (more detail provided in chapter one) are: First, as stated the relationship may be complex with patterns differing across majority Muslim countries. Second, religious struggle does not seem to be as prevalent among Muslims compared to Christians (e.g., Abu-Raiya et al., 2015) and therefore the religious struggle paradigm may be an inadequate paradigm for studying the relationship between religious beliefs and mental disorder (see chapter one, section 1.2). Third, with the exception of very few studies (e.g., Abu Raiya et al., 2008; Abu-Raiya et al., 2018; Ghorbani et al., 2013), most work with Muslim participants in this domain has utilised scales developed with Christian populations (Amer, 2021) such as the RCOPE, brief RCOPE, or

the RSS. As Abu-Raiya et al. (2018) point out, these scales focus largely on divine struggles and are limited in relation to other forms of struggle (e.g., struggling with religious doubt). Fourth, even the PMIR (Abu Raiya et al., 2008) developed specifically with a number of Muslim samples may be limited with regard to its utility with more conservative populations. These shortcomings include the fact that the scale is designed to measure Islamic religiousness in general and not specifically religious struggle or maladaptive beliefs. Moreover, even those subscales that specifically target religious struggle or potentially unhelpful beliefs are arguably inappropriate for a practicing Muslim population. For example, items such as "I find myself doubting the existence of Allah" or "I find aspects of Islam unfair" (included in the PMIR Islamic Religious Struggle subscale) are very likely to be considered unacceptable questions to ask a devout Muslim participant.

5.1.2 Current Study

This final study represents the culmination of the research undertaken in this thesis and the realisation of its ultimate goal. It also attempts to fill an identified gap in the research concerning the relationship between maladaptive religious beliefs and psychological disorder among a devout Muslim population.

More specifically, having developed a culturally sensitive instrument designed to identify maladaptive religious schemata, the task was then to explore how these religious schemata relate to two common mental health disorders – depression and anxiety. As stated previously, the current study is conducted in an indigenous Muslim context where religious adherence is the norm, and religious beliefs are deeply held (Pew Research Center, 2012, 2016). So, given the observation that religious beliefs are generally helpful in relation to mental disorder, the question as to why there is then a high prevalence of depression and anxiety (GBD 2019 Mental Disorders Collaborators, 2022) in this region is a crucial one. This study aims to address this question posed at the outset of the thesis by investigating if, and which, types of maladaptive religious beliefs may be contributing to the observed increased susceptibility to depression and anxiety.

Building upon the theoretical foundations presented throughout the course of the current thesis, the study formulates the following predictions:

1. Consistent with previous research and in line with fundamental CBT principles of a link between thoughts and emotions (chapter one section 1.2.3), it is hypothesised that:

H1: High scores on the C-ReSQue and A-ReSQue, (indicating stronger endorsement of a maladaptive religious schema) will be associated with meeting cut-off scores on established measures of depression and anxiety.

2. Relying on the schema model which postulates that schemata are relatively stable throughout the lifespan (chapter one, section 1.2.3.4), and in line with the findings reported in chapter three, this study predicts that:

H2: There will be similar patterns of influence on indices of depression and anxiety between the C- and A-ReSQue subscales.

3. Finally, based on faith development theory that recognises the evolution of religious beliefs (discussed in chapter three), it is predicted that:

H3: There will also be divergence in the patterns of influence on depression and anxiety between particular subscales of the C- and A-ReSQue.

5.2 Method

5.2.1 Participants

A total of 250 students enrolled at a large university located in the Gulf, recruited between March and May 2021, completed all measures in this study. The sample consisted of students from different colleges within the institution, with the majority registered for general education courses. At the outset, a total of 269 participants entered the portal but data from only 250 were used. The remaining 19 participants' information was either not complete, or individuals chose not to consent for their data to be used in the study.

Demographic information collected included age, gender, socioeconomic status (SES), and religiosity. The participants were predominantly female (78.4%, *n* = 196), with males making up the remaining 21.6% (*n* = 54). The mean age was 20.6 years (*SD* = 2.19), with an age range of 18–33 years. In terms of nationality, the majority of the participants (91.2%) were GCC nationals, with the remaining 8.8% identifying as Other. The majority, 79.2% of participants, considered themselves religious (to at least some extent), and 20.8% identified as not religious. In terms of SES, the participants self-identified as follows: upper-class (4.8%), upper-middle class (30.4%), middle class (60.4%), lower-middle class (3.2%), and working class (1.2%).

5.2.2 Recruitment and Study Procedure

To initiate recruitment for this study, several university faculty members, including myself and my assistants, used email and word-of-mouth to inform potential participants about the study. Subsequently, I conducted multiple online meetings with groups of interested participants. During

these gatherings, I clearly explained the aim of the study and the participants' role within it. Ample opportunity was given to participants to ask questions and seek clarification. As stated previously, this strategy of meeting participants and verbally elucidating the purpose of the study was thought to be important given the sensitivity of the topic under investigation, and given the local cultural preference for verbal exchange of information over written text.

Upon confirming their willingness to continue, each individual received a unique weblink granting them access to an online survey portal hosted by Qualtrics. Participants were initially presented with information on the study, details on ethical approval from relevant bodies, and a consent form which they were required to complete before proceeding to the main study portal. Thereafter, respondents completed a demographic questionnaire and subsequently the four instruments used in the study: (1) PHQ-9, (2) GAD-7, (3) C-ReSQue, and (4) A-ReSQue. To encourage participation, academic bonus points were offered to all those who entered step one of the study portal (information and consent form) regardless of whether they continued to complete the main questionnaires. This strategy was deemed ethically appropriate as it encouraged participation while at the same time eliminated any element of coercion (i.e., participants received bonus points even if they felt the questionnaires were too uncomfortable for them to complete).

5.2.3 Measures

Patient Health Questionnaire (PHQ-9)

The Patient Health Questionnaire-9 (PHQ-9) (Kroenke et al., 2001) was employed as a measure of depression in this study (Appendix 10). The PHQ-9 comprises nine items aligned with the DSM-5 criteria for diagnosing a major depressive episode (5th ed.; DSM-5; American Psychiatric Association, 2013). Participants are asked to rate statements that best described their feelings over the preceding two weeks, with items scored on a 4–point scale ranging from 0 (not at all) to 3 (nearly every day). Scores on individual items are summed to provide an overall total score. The range of scores on this measure is 0–27. Scores between 0–4 are interpreted as normal, 5–9 indicate mild symptoms, 10–14 indicate moderate, 15–19 indicate moderately severe symptoms and 20–27 indicate severe symptoms of depression (NHS Buckinghamshire Talking Therapies, 2023). A clinical caseness threshold (cut-off) is a score of ≥ 10 (Clark et al., 2009).

This instrument, widely used in both empirical research and clinical practice, has demonstrated high internal consistency, with Cronbach's alpha coefficients of .86 and .89, and excellent test-retest reliability (r = .84) reported in the original study by Kroenke et al., (2001). Importantly, the PHQ-9 has been validated and has demonstrated reliability (α = 0.86) with a Gulf Arab population (Saudi Arabian)

(AlHadi et al., 2017), underscoring its appropriateness for use in the present study. In the current sample, Cronbach's alpha for the PHQ-9 was .82.

Generalised Anxiety Disorder Scale (GAD-7)

The Generalised Anxiety Disorder Scale (GAD-7) (Spitzer et al., 2006) was used to measure anxiety (Appendix 10). The rationale for the selection of the GAD-7 mirrors that for the PHQ-9, namely its widespread use in empirical research and clinical practice, relative brevity, and previous validation with Arab populations (AlHadi et al., 2017; Sawaya et al., 2016). The GAD-7 has shown adequate reliability, with a Cronbach's alpha ($\alpha = 0.76$) in the AlHadi et al. (2017) study, and in the current study, the internal consistency of the GAD-7 was excellent ($\alpha = .89$). The GAD-7 asks respondents to reflect over the past two weeks and indicate to what extent they had been struggling with a list of seven symptoms (constituting the seven items of the scale). Scores are elicited on a 4–point Likert scale ranging from 0 (not at all) to 4 (nearly every day). A total item score of 0–4 is considered normal, 5–9 is indicative of mild symptoms, 10–14 is indicative of moderate symptoms, and 15–21 indicates severe symptoms (NHS Buckinghamshire Talking Therapies, 2023). A total score of ≥ 8 indicates caseness and can discriminate clinical from non-clinical populations (Clark et al., 2009).

Religious Schemata Questionnaire (ReSQue)

Maladaptive religious schemata were assessed using the Religious Schemata Questionnaire (ReSQue). This self-developed questionnaire consists of two versions: a childhood version (C-ReSQue) and an adulthood version (A-ReSQue).

Each ReSQue contains six subscales representing Theocentric Core Beliefs (e.g., "As an adult [growing up] I believe[d] God sees [saw] me as a bad person"); Theophobia (e.g., in A-ReSQue: "As an adult, I pray more out of fear than faith"); or in C-ReSQue (e.g., "If I'm honest, growing up, the fear of God, more than the love of God, directed my behaviour"); Eschatological Anxiety (e.g., "As an adult [growing up], I worry [worried] about what will happen to me on the day of judgment"); Religious Obligation Distress (e.g., "As an adult [growing up] I feel[felt] bad about myself when [if] I don't [didn't] pray on time"); Forbidden Love (e.g., "As an adult [growing up], I worry [worried] whenever I have [had] romantic feelings even if I don't [didn't] act on them"); and Theocentric Conditional Beliefs (e.g., "As an adult [growing up], I believe [believed] God is [was] angry with those who don't follow Islam").

The ReSQue requires respondents to rate the extent to which each item of the scale describes their beliefs and feelings growing up (childhood version) or as adults (adult version). A scale ranging from completely untrue (1) to completely true (6) records the responses. Items constituting each subscale are very similar and at times identical across the two versions of the questionnaire. Each sub-scale comprises three items leading to a total of eighteen items per scale.

In the current sample, Cronbach's alpha of .89 for the C-ReSQue was demonstrated indicating excellent internal consistency. The A-ReSQue had a similar Cronbach's alpha of .86. Test-retest reliability, assessed three months after the initial test, was good for both the C-ReSQue (r = .72, N = 71) and the A-ReSQue (r = .69, N = 71). For additional details and validity and reliability tests see chapter four.

5.2.4 Demographics

Demographic variables included: age, gender, nationality, SES, and religiosity. In conformity with local legal restrictions gender was reported only as male or female. Nationality was dichotomously distinguished, with participants identified as either from the GCC states or other countries. Socioeconomic status consisted of five categories: upper class, upper-middle class, middle class, lower-middle class, and working class. Finally, religiosity was assessed as a binary variable with participants self-identifying as either religious or non-religious.

5.3 Results

To provide both basic information and set the context and a rationale for further analyses the main study data were summarised using standard descriptive statistics. Comparisons tests were then conducted in order to identify any significant differences between demographic variables in relation to the main variables under investigations. These tests provided information on the influence of these demographic markers on the main variables and thus inform decisions about their inclusion in later analyses.

Subsequently bivariate comparisons were conducted to explore relationships between each predictor variable (C-ReSQue, C-ReSQue subscales, A-ReSQue, A-ReSQue subscales) and the outcome variables (PHQ-9 and GAD-7). This was to provide initial information about any potential meaningful relationships between predictor and outcome variables.

Given the primary aim of the current thesis was an examination of the *clinical* significance of the relationship between maladaptive religious schemata and common mental health problems, all predictor and outcome variables were dichotomised to above cut-off (high) and below cut-off (low). This approach facilitates the identification of clinically meaningful distinctions in the data. In line with Grey et al. (2023) methodology, the cut-off for high scores on each version of the ReSQue (and individual subscales) was determined as the top quartile score on the particular version of the ReSQue. This approach allows for the identification of two groups of participants, one endorsing lower scores and the other comparatively higher scores. For the C-ReSQue, the cut-off point for the upper quartile

was 71 (i.e. scores > 71 were considered high and scores ≤ 71 deemed low), while for the A-ReSQue, 69 constituted the cut-off (i.e. scores > 69 were considered high and scores ≤ 69 considered low). For the PHQ-9 and GAD-7, previously established standard thresholds for cut-off were adhered to: namely ≥ 10 being the cut-off (or caseness) for the PHQ-9 (Kroenke et al., 2001), and ≥ 8 for the GAD-7 (Plummer et al., 2016). The relationships between the resulting dichotomous variables and the predictive power of each of the predictors after accounting for the relative influence of demographic variables was then explored using logistic regression analyses.

A primary benefit of logistic regression analysis is that it provides an odds ratio which is clinically useful for understanding the relationship between predictor variables and category membership (Zabor et al., 2022) alluded to above. Odds ratios are used to compare the relative odds of the occurrence of the outcome of interest (e.g., meeting the threshold on the PHQ-9 and GAD-7), given exposure to the variable of interest (e.g., high scores on the ReSQue). The procedure also allows for the examination of how multiple predictors (in this case, scores of the C- and A-ReSQue subscales) are associated with the likelihood of meeting above-clinical-threshold symptoms of depression and anxiety. Therefore, to understand the extent to which high scores on both versions of the ReSQue and their subscales predicted above caseness scores on the mental health screens multivariate logistic regression analyses were conducted as a final set of analyses.

Descriptive statistics

The main data collected during the course of this study are summarised in tables 15 and 16 below**.** Using several criteria to determine normality (including the Shapiro-Wilk test and visual inspection of distribution graphs), all variables except the C-ReSQue and A-ReSQue seem to indicate deviation from normal distribution (table 15). In Table 16, the main predictor and outcome variables are broken down by gender and religiosity, with visual inspections of distribution graphs and Shapiro-Wilk statistics showing a number of deviations from normality

Table 15 Descriptive Statistics Main Study Variables (PHQ-9, GAD-7, C-ReSQue, A-ReSQue, and ReSQue subscales) for N = 250

	Mean	SD	Range	Minimum	Maximum	Shapiro-Wilk	p-value
PHQ-9	10.41	5.36	26.00	1.00	27.00	.96	<.001
GAD-7	8.67	5.40	21.00	.00	21.00	.96	<.001
C-ReSQue Total	60.40	17.44	87.00	18.00	105.00	.99	.439
A-ReSQue Total	57.67	15.79	76.00	18.00	94.00	.99	.020
C-ReSQue Subscale							
C-Theocentric Core beliefs	7.08	4.26	15.00	3.00	18.00	.86	<.001
C-Theophobia	10.13	4.48	15.00	3.00	18.00	.96	<.001
C-Eschatological Anxiety	11.23	4.75	15.00	3.00	18.00	.94	<.001
C-Religious Obligations Distress	13.23	4.11	15.00	3.00	18.00	.91	<.001
C-Forbidden Love	7.42	4.61	15.00	3.00	18.00	.86	<.001
C-Theocentric Conditional Beliefs	11.31	4.58	15.00	3.00	18.00	.94	<.001
A-ReSQue Subscales							
A-Theocentric Core Beliefs	8.61	4.47	15.00	3.00	18.00	.92	<.001
A-Theophobia	6.87	3.98	15.00	3.00	18.00	.87	<.001
A-Eschatological Anxiety	13.18	4.65	15.00	3.00	18.00	.87	<.001
A-Religious Obligations Distress	14.48	4.16	15.00	3.00	18.00	.81	<.001
A-Forbidden Love	6.81	4.43	15.00	3.00	18.00	.82	<.001
A-Theocentric Conditional Beliefs	7.72	4.27	15.00	3.00	18.00	.90	<.001

Both versions of the ReSQue appear, generally, to be within acceptable limits of normal distribution across both gender and religiosity. However, A Shapiro-Wilk test indicated that variable PHQ-9 and GAD-7 scores seem to deviate from normality across the demographic variables' categories.

Table 16 *Descriptive Statistics, C-ReSQue, A-ReSQue, PHQ-9, and GAD-7 Scores by Gender and Religiosity*

		C-ReSQue	A-ReSQue	PHQ-9	GAD-7*
Gender*					
Male	Mean	56.69	53.31	8.41	6.37
	N	54	54	54	54
	SD	16.15	17.55	4.72	4.57
	Minimum	18.00	18.00	2.00	.00
	Maximum	92.00	82.00	22.00	21.00
	Skewness	-.263	-.440	1.089	1.085
	Kurtosis	-.225	-.788	.880	1.579
	Shapiro-Wilk	W=.99, P<.85	W=.95, P<.02	W=.91, P<.00	W=.92, P<.00
Female	Mean	61.42	58.87	10.96	9.31
	N	196	196	196	196
	SD	17.68	15.10	5.40	5.43
	Minimum	18.00	18.00	1.00	.00
	Maximum	105.00	94.00	27.00	21.00
	Skewness	.123	-.219	.564	.373
	Kurtosis	-.180	-.007	-.041	-.714
	Shapiro-Wilk	W=.99, P<.38	W=.99, P<.22	W=.97, P<.00	W=.97, P<.00
Religiosity					
Not Religious	Mean	59.58	53.35	10.79	7.90
	N	52	52	52	52
	Std. Deviation	19.40	17.38	5.56	5.58
	Minimum	25.00	18.00	1.00	.00
	Maximum	105.00	89.00	25.00	21.00
	Skewness	.451	.006	.582	.650
	Kurtosis	-.042	-.639	-.418	-.016
	Shapiro-Wilk	W=.97, P<.26	W=.98, P<.71	W=.95, P<.02	W=.93, P<.00
Religious	Mean	60.61	58.80	10.31	8.87
	N	198	198	198	198
	Std. Deviation	16.94	15.19	5.31	5.33
	Minimum	18.00	18.00	2.00	.00
	Maximum	98.00	94.00	27.00	21.00
	Skewness	.048	-.405	.680	.450
	Kurtosis	-.139	.191	.166	-.608
	Shapiro-Wilk	W=.99, P<.22	W=.98, P<.02	W=.96, P<.00	W=.96, P<.00

* Levene's test, an additional statistic to check for homogeneity of variable revealed a significant statistic, indicating an additional violation of the assumption of homogeneity of variances for the gender variable on GAD-7.

T-tests were subsequently conducted to determine whether the means between males and females and religious and non-religious individuals differed significantly on the C-ReSQue and A-ReSQue scores. Analyses showed no significant difference in the C-ReSQue scores across gender and religiosity. However, gender was found to be significantly related to A-ReSQue scores $t(248) = -2.307$, $p = .022$, with males ($M = 53.31$, $SD = 17.56$) scoring on average 5.55 points lower than females ($M = 58.87$, $SD = 15.10$) (Table 17). This represents a small to medium effect size ($d = -0.36$). Self-identified religiosity was also significantly impactful in terms of A-ReSQue scores, $t(248) = -2.235$, $p = .026$, with non-religious individuals ($M = 53.47$, $SD = 17.37$) scoring a mean of 5.46 points lower than religious individuals ($M = 58.80$, $SD = 15.19$), again with a small to medium effect size ($d = -0.35$).

Table 17 *Independent T-test Results for Differences in A-ReSQue Scores by Gender and Religiosity*

Independent Variables	Dependent Variables	t-value	df	Mean Difference	Std. Error Difference	p-value	Cohens d
Gender	A-ReSQue	-2.307	248	-5.55	2.41	.022	-.36
Religiosity	A-ReSQue	-2.235	248	-5.46	2.44	.026	-.35

For Gender, Group 1 represents Males (coded as 0) and Group 2 represents Females (coded as 1). For Religiosity, Group 1 represents Not Religious (coded as 0) and Group 2 represents Religious (coded as 1).Note: p-value = significance level of the test (two-tailed). Significance is set at $p < .05$.

Finally, Mann-Whitney tests conducted on the PHQ-9 and GAD-7 across religiosity showed no significant differences between the religious and non-religious groups. However, the Mann-Whitney U test investigating differences between males and females in terms of scores on the PHQ-9 revealed statistically significant results (Table 18). Females scored significantly higher than males on the PHQ-9 $z = 3.32$, $p < .001$, with a medium effect size ($r = .21$). Females also reported significantly higher GAD-7 scores compared to males ($z = 3.61$, $p < .001$), again with a medium effect size ($r = .22$).

Table 18 *Mann-Whitney U Test Results for Differences in PHQ-9 and GAD-7 Scores by Gender*

Independent Variables	Dependent Variables	U-Value	Standard Error	Standardized Test Statistic	p-value	Effect size ®
Gender	PHQ-9	6849.50	469.66	3.316	<.001	.21
	GAD-7	6985.50	469.64	3.606	<.001	.22

Note: p-value = significance level of the test (two-tailed). Significance is set at $p < .05$.

Twenty-eight percent of males scored above the PHQ-9 cut-off point, and 33% scored above the cut-off for GAD-7. In contrast, 57% of females had total scores above the cut-off for the PHQ-9 and 56% above the GAD-7 cut-off. A subsequent analysis using the Chi-square test of independence estimating

the relationship between gender and meeting the cut-off on the PHQ-9 was significant, (X^2 (1, N = 250) = 14.606, p < .001), with an effect size using Cramer V of .242, indicating a small to moderate association between gender and meeting the cut-off on PHQ-9. Females were approximately twice as likely as males to meet the PHQ-9 cut-off. The same test was conducted for gender on meeting the cut-off on GAD-7. Again, the Chi-square test of independence was significant, (X^2 (1, N = 250) = 8.800, p = .003) indicating a significant association between gender and meeting the cut-off on GAD-7. The Cramer V derived effect size was .188, suggesting a small effect for gender. The relative probability of females meeting the cut-off on GAD-7 was 1.68 times higher, compared to males.

One further test was conducted during this initial stage of analyses to explore potential differences between the mean total scores on the C-ReSQue and A-ReSQue. A paired-samples t-test showed a statistically significant decrease between scores on the C-ReSQue (M = 60.40, SD = 17.44) and scores on the A-ReSQue (M = 57.67, SD = 15.79, t(249) = 2.67, p = .008, two-tailed). The mean decrease in ReSQue score was 2.73, (95% CI [0.71, 4.74]). The size of the difference between the means was small (d = .17).

5.3.1 Bivariate Correlations

Although bivariate correlations between each of the ReSQue measures (and their individual subscales) and the two mental health measures – PHQ-9 and GAD-7 – relevant to construct validity were conducted in the previous chapter, they are repeated here for ease of reference. Table 19 displays the Spearman's two-tailed correlation coefficient for the C-ReSQue, C-ReSQue subscales and both mental health questionnaires.

Spearman's correlation coefficient revealed that total scores on the C-ReSQue were strongly correlated with all individual subscales (r = .5 to r = .8), with correlations remaining significant following Bonferroni adjustment (a correction carried out on all p values). In addition to the observed significant positive correlation between the PHQ-9 and GAD-7 (r = .67, p < .001), the PHQ-9 was significantly correlated with the C-ReSQue total score (r = .37, p < .001), and five of the C-ReSQue subscales, specifically: Forbidden Love (r = .36, p < .001); Theocentric Core Beliefs (r = .33, p < .001); Eschatological Anxiety (r = .31, p < .001); Theophobia (r = .28, p < .001) and Religious Obligations Distress (r = .19, p < .01). The C-ReSQue Total was also significantly correlated with the GAD-7 (r = .33, p < .001). The same five C-ReSQue subscales demonstrated significant correlation with the anxiety measure, namely: Forbidden Love (r = .31, p < .001); Eschatological Anxiety (r = .29, p < .001); Theocentric Core Beliefs (r = .26, p < .001); Theophobia (r = .20, p < .001) and Religious Obligations Distress (r = .17, p < .01).

Table 19 *Spearman Correlation Coefficients Among C-ReSQue, PHQ-9, GAD-7, and C-ReSQue Subscales*

	C-ReSQue	PHQ-9	GAD-7	C-Theocentric Core Beliefs	C-Theophobia	C-Eschatological Anxiety	C-Religious Obligations Distress	C-Forbidden Love
PHQ-9	.373***		.			.		
GAD-7	.331***	.665***			.		.	.
C-Theocentric Core Beliefs	.586***	.331***	.225***		.	.		
C-Theophobia	.630***	.281***	.202***	.369***		.		.
C-Eschatological Anxiety	.801***	.303***	.294***	.420***	.495***		.	
C-Religious Obligations Distress	500**	.191**	.174**	.166**	.008	393***		.
C-Forbidden Love	.619**	.362***	.311***	.251***	.305***	.353***	.244***	
C-Theocentric Conditional Belief	.616**	.095	.130*	.165**	.297***	.396***	.238***	.287***

*** correlation significant following Bonferroni adjustment (two tailed); **correlation significant at <.01 (two tailed); *correlation significant at <.05 (two tailed).

The overall trend in the above results indicates significant and robust positive correlations between the C-ReSQue and both mental health measures. The analyses also indicate that five of the C-ReSQue subscales also have significant associations with both depression and anxiety measures.

Table 20 displays the correlation matrix among the A-ReSQue, A-ReSQue subscales, and the mental health measures. Following adjustment for multiple comparisons using the Bonferroni correction, the following correlations remained significant: A-ReSQue total score correlated positively (and to at least moderate strength) with all its subscales (r = .42 to r = .70, p < .001). The stronger A-ReSQue correlations were observed with A-Eschatological Anxiety (r = .70, p < .001), A-Theophobia (r = .65, p < .001). The A-ReSQue total score correlations with PHQ-9 (r = .29, p < .001) and GAD-7 (r = .28, p < .001), although weaker, were significant and positive in direction. Furthermore, three A-ReSQue subscales showed stronger significant positive correlations with the PHQ-9 and GAD-7: Theocentric Core Beliefs (PHQ-9, r = .40, p < .001; GAD-7, r = .35, p < .001); Theophobia (PHQ-9, r = .29, p < .001; GAD-7, r = .31, p < .001); and Eschatological Anxiety (PHQ-9, r = .28, p < .001; GAD-7, r = .32, p < .001).

With respect to correlations among the A-ReSQue subscales, the strongest relationship was among Theocentric Core Beliefs and Theophobia (r = .60, p < .001), suggesting individuals who were most fearful of God endorsed higher negative Theocentric Core Beliefs scores. Eschatological Anxiety was also significantly correlated (relatively strongly) with Religious Obligations Distress (r = .39, p < .001), Theophobia (r = .37, p < .001) and Theocentric Core Beliefs (r = .33, p < .001), thus indicating a substantial shared variance between these subscales. Finally, a significant positive relatively stronger correlation was also noted among the Theocentric Conditional Beliefs and Religious Obligations Distress subscales (r = .32, p < .001).

Table 20 *Spearman Correlation Coefficients Among A-ReSQue, PHQ-9, GAD-7, and A-ReSQue Subscales*

	A-ReSQue	PHQ-9	GAD-7	A-Theocentric Core Beliefs	A-Theophobia	A-Eschatological Anxiety	A-Religious Obligations Distress	A-Forbidden Love
PHQ-9	.293***							
GAD-7	.284***	.665***						
A-Theocentric Core Beliefs	.578***	.400***	.352***					
A-Theophobia	.652***	.291***	.306***	.597***				
A-Eschatological Anxiety	.701***	.276***	.321***	.334***	.369***			
A-Religious Obligations Distress	.419***	-.002	.028	-.063	-.054	.385***		
A-Forbidden Love	.587***	.186**	.069	.176**	.222***	.255***	.199**	
A-Theocentric Conditional Belief	.587***	-.044	.039	.094	.256***	.230***	.324***	.275***

*** correlation significant following Bonferroni adjustment (two tailed); **correlation significant at <.01 (two tailed) *correlation significant at <.05 (two tailed)

5.3.2 Binary and Multivariate Logistic Regression

C-ReSQue Predicting PHQ-9

For bivariate comparisons, each variable was entered separately as a predictor for PHQ-9. (unadjusted) odds ratios were derived at this stage (table 21). Subsequently, multivariate logistic regression using all variables of interest was utilised to ascertain the adjusted odds ratios (table 21). In assessing the high C-ReSQue total scores' association with PHQ-9 cut-offs, demographic variables were entered first followed by the dichotomised C-ReSQue scores. This allowed for evaluating the impact of high C-ReSQue total scores on PHQ-9 cut-offs, while controlling for demographic variables. In exploring the relationship between the C-ReSQue subscales and PHQ-9 cut-offs, variables were inserted in SPSS in the following order: 1) demographic variables (gender and religiosity); 2) C-ReSQue total scores; and 3) all C-ReSQue subscales. This procedure allowed for determining the relative predictive power of each variable whilst controlling for others.

Gender emerged as a significant predictor of meeting the PHQ-9 cut-off, with females having an adjusted odds-ratio (AOR) of 3.72 (95% CI [1.81, 7.64], $p < .001$), indicating they were more than 3 times more likely to score above the cut-off for PHQ-9 than males. The large effect size ($d = 0.72$) suggests a substantial difference between males and females on the depression measure. Significantly, after controlling for demographic variables, high C-ReSQue total scores were also predictive of high PHQ-9 scores (AOR = 3.0, 95% CI [1.59, 5.68], $p < .001$), signifying that individuals scoring in the upper quartile of the C-ReSQue are three times more likely to score above the cut off on the PHQ-9, compared to those who scored below the C-ReSQue cut-off. The medium effect size ($d = 0.61$) suggests a moderate effect for the association between high C-ReSQue scores on meeting cut-off PHQ-9 scores.

In regards to C-ReSQue subscales, high scores on the Forbidden Love subscale were significantly predictive of meeting the cut-off on the PHQ-9 (AOR = 3.20, 95% CI [1.65, 6.24], $p < .001$), with those scoring above the cut-off on this subscale being more than three times as likely to score above the PHQ-9 cut-off. This translates as a probability of scoring above the cut-off on the PHQ-9, given a high C-Forbidden Love score of 76% or above. The effect size was also moderate ($d = .64$) for this relationship. Significant associations, albeit with smaller effect sizes (but remaining moderate in strength), were found between the C-Theocentric Core beliefs subscale, high PHQ-9 (AOR = 2.64, 95% CI [1.35, 5.17], $p < .01$, $d = 0.54$) scores, C-Religious Obligations Distress subscales, and high scores on the depression measure (AOR = 2.58 (95% CI [1.36, 4.89], $p < .01$, $d = 0.54$). Individuals scoring high on these subscales were 2.6 times more likely to reach above the cut-off on the PHQ-9, with a 72% probability of those scoring high on these subscales to meet the PHQ-9 cut-off.

C-ReSQue Predicting GAD-7

Gender was also a significant predictor of meeting the GAD-7 cut-off, with females being 2.4 times more likely to meet the GAD-7 cut-off (AOR = 2.41, 95% CI [1.26, 4.61], $p < .01$, $d = 0.48$). The C-ReSQue total score retained its significant influence on GAD-7 scores after controlling for demographic variables GAD-7 (AOR = 2.40, 95% CI [1.30, 4.43], $p < .01$, $d = 0.48$) (Table 21). Results show high scoring individuals were more than twice as likely as lower scoring individuals to score above the cut-off on the GAD-7. Converting these adjusted odds ratios (AORs) to probability yields a 70% chance of scoring above the GAD-7 cut-off for high C-ReSQue scorers.

High C-Eschatological Anxiety subscale scores were also significantly associated with meeting GAD-7 cut-off scores (AOR = 2.47, 95% CI [1.34, 4.54], $p < .01$, $d = 0.50$), again with a 70% probability of meeting the GAD-7 cut-off for individuals scoring high on this subscale. The moderate effect size indicated a meaningful link between high scores on the C-Eschatological Anxiety subscale and meeting the cut-off on the GAD-7. Although a smaller effect size ($d = .36$) was observed, the C-Forbidden Love subscale was also significantly influential in meeting the cut-off on the GAD-7. The AOR was 1.94 (95% CI [1.04, 3.63], $p < .05$) with individuals scoring above the cut-off on this subscale being nearly twice as likely to score above the cut-off on the GAD-7 (in the case with 65% probability of meeting the cut-off for high scores on C-Forbidden Love subscale).

Table 21 *Bivariate and Multivariate Logistic Regression Analyses of C-ReSQue Predicting PHQ-9 and GAD-7 Cut-offs*

Predictor	N	> Measure Cut-off N (%)	Odds Ratio	Adjusted Odds Ratio	Cohen's d
		PHQ-9			
Gender					
Male	54	15 (27.8)			
Female	196	112 (57.1)	3.476 (1.793-6.702)***	3.722 (1.813-7.640)***	0.72
C-ReSQue Total					
No	188	83 (44.1)			
Yes	62	44 (71)	3.092 (1.665-5.745)***	3.008 (1.592-5.682)***	0.61
C-ReSQue subscales					
C-Forbidden Love					
No	184	79 (42.9)			
Yes	66	48 (72.7)	3.544 (1.916-6.558)***	3.205 (1.646-6.239)***	0.64
C-Theocentric Core beliefs					
No	188	84 (44.7)			
Yes	62	43 (69.4)	2.802 (1.520-5.166)**	2.640 (1.349-5.168)**	0.54
C-Religious Obligations Distress					
No	181	78 (43.1)			
Yes	69	49 (71)	3.235 (1.780-5.880)**	2.580 (1.360-4.892)**	0.54
		GAD-7	**Odds Ratio**	**Adjusted Odds Ratio**	**Cohen's d**
Gender					
Male	54	18 (33.3)			
Female	196	110 (56.1)	2.558 (1.359-4.814)**	2.408 (1.257-4.613)**	.48
C-ReSQue Total					
No	188	86 (45.7)			
Yes	62	42 (67.7)	2.491 (1.360-4.560)**	2.396 (1.297-4.427)**	.48
C-ReSQue subscales					
C-Eschatological Anxiety					
No	177	77 (43.4)			
Yes	73	51 (67.9)	3.011 (1.683-5.386)**	2.470 (1.343-4.542)**	.50
C-Forbidden Love					
No	184	84 (45)			
Yes	66	44 (66.7)	2.381 (1.322-4.288)**	1.939 (1.035-3.633)*	.36

Note: Odds Ratios (ORs) represent the univariate predictor-outcome relationship, while Adjusted Odds Ratios (AORs) control for other variables. In the C-ReSQue total model, demographic variables and the C-ReSQue total score were included; for the C-ReSQue subscale model, demographic variables and all subscales were included. *** p < .001, ** p < .01, * p < .05.

A-ReSQue Predicting PHQ-9

Similar overall patterns were observed with respect to associations between the adult version of the ReSQue and the PHQ-9, to those of the C-ReSQue, but with some notable differences (Table 22). As expected, gender also remained a significant predictor in this model. Specifically, female gender was associated with a 3.35 times higher likelihood of meeting the PHQ-9 threshold for caseness (AOR = 3.35, 95% CI [1.67, 6.71], $p < .001$). This was a meaningful result, with a moderate effect size of $d = .67$.

Scoring high on the A-ReSQue total was also significantly predictive of meeting the PHQ-9 cut-off, with individuals scoring above cut-off on the A-ReSQue being over three times more likely to score above

the cut-off on the PHQ-9 (AOR = 3.09, 95% CI [1.60, 6.00], $p < .001$). A probability of 75% is associated with this adjusted odds ratio, with the moderate effect size ($d = .62$) indicating noteworthy effects.

Regarding the A-ReSQue subscales, A-Theocentric Core Beliefs (AOR = 2.39, 95% CI [1.31, 4.25], $p < .01$) and A-Eschatological Anxiety (AOR = 2.33, 95% CI [1.22, 4.41], $p < .01$), both had significant and meaningful predictive value for the likelihood of scoring above the PHQ-9 cut-off, as indicated by the moderate effect sizes $d = .48$ and $d = .47$, respectively. High scores in these subscales are associated with a 70% probability of meeting PHQ-9 caseness. The A-Forbidden Love subscale also significantly predicted the PHQ-9 cut-off, though its odds ratio was slightly lower (AOR = 1.98, 95% CI [1.054, 3.71], $p < .05$, $d = .38$), as was the probability of meeting the cut-off for those scoring high on this scale (66%).

A-ReSQue Predicting GAD-7

In this final model, (Table 22) gender was associated with meeting the cut-off for GAD-7, as well. Being female was associated with a 2.44-fold increase in meeting the cut-off for GAD-7 (AOR = 2.44, 95% CI [1.26, 4.70], $p < .01$). This difference was observed to have a moderate effect size ($d = .50$).

High total A-ReSQue scores were found to be associated with a significant increase in the odds of scoring above the cut-off on the GAD-7 by nearly twofold (AOR = 1.98, 95% CI [1.06, 3.69], $p < .05$), translated to a probability of 66% of meeting the GAD-7 cut-off for high sores on A-ReSQue total. Again, small to moderate effects were observed ($d = .38$) suggesting that A-ReSQue scores were important in predicting clinically significant GAD-7 scores.

Finally, in terms of the impact of individual A-ReSQue subscales on scores above the GAD-7 cut-off, A-Theocentric Core Beliefs (AOR = 2.27, 95% CI [1.27, 4.04], $p < .01$) and A-Eschatological Anxiety (AOR = 2.20, 95% CI [1.19, 4.09], $p < .05$) both demonstrated significant influence on the GAD-7 cut-off. These sets of relationships had a moderate effect size ($d = .45$ and $d = .44$, respectively) suggesting both subscales had a notable effect on exceeding GAD-7 cut-off scores, even after accounting for all other variables. Scoring high on either the A-Theocentric Core Beliefs or the A-Eschatological Anxiety is associated with a 69% probability of meeting GAD-7 caseness scores.

Table 22 *Bivariate and Multivariate Logistic Regression Analyses of A-ReSQue Predicting Cut-off Scores for PHQ-9 and GAD-*

Predictor	*N*	> Measure Cut off, N (%)	Odds Ratio	Adjusted Odds Ratio	Cohen's *d*
		PHQ-9			
Gender					
Male	54	15 (27.8)			
Female	196	112 (57.1)	3.476 (1.793-6.702)***	3.353 (1.677-6.705)***	.67
A-ReSQue Total					
No	193	86 (44.6)			
Yes	57	41 (71.9)	3.188 (1.675-6.069)***	3.094 (1.598-5.991)**	.62
A-ReSQue subscales					
A-Theocentric Core beliefs					
No	168	71(42.3)			
Yes	82	56 (68.3)	2.943 (1.686-5.135)***	2.389 (1.313-4.349)**	.48
A- Eschatological Anxiety					
No	183	80 (43.7)			
Yes	67	47 (70.1)	3.026(1.662-5.509***	2.325 (1.225-4.414)**	.47
A-Forbidden Love					
No	182	82 (45.1)			
Yes	69	45 (66.2)	2.386 (1.334-4.266)**	1.977 (1.054-3.708)*	.38
		GAD-7			
Gender					
Male	54	18 (33.3)			
Female	196	110 (56.1)	2.558 (1.359-4.814)**	2.436 (1.264-4.697)**	.50
A-ReSQue Total					
No	193	91 (47.1)			
Yes	57	37 (64.9)	2.074 (1.123-3.828)*	1.979 (1.062-3.687)*	.38
A-ReSQue Subscale					
A-Theocentric Core beliefs					
No	168	73 (43.5)			
Yes	82	55 (67.1)	2.651 (1.526-4.606)***	2.268 (1.274-4.038)**	.45
A- Eschatological Anxiety					
No	183	82 (44.8)			
Yes	67	46 (68.7)	2.698 (1.492-4.880)***	2.203 (1.187-4.090)*	.44

Note: OR is the predictor on the outcome alone; AOR is the predictor on outcome in model that included demographic variables and A-ReSQue total in the case of A-ReSQue total; and demographic variable plus all subscales in the case of A-ReSQue subscale. ***<0.001, **<0.01, *<0.05

5.3.3 Summary

Figures 5 and 6 summarise the main findings using a forest plot. The pattern of results presented above demonstrates that higher total scores (defined as scores in the upper quartile of each scale) on the religious schemata questionnaires, C-ReSQue and A-ReSQue, significantly increase the likelihood of meeting the clinical cut-offs on the PHQ-9 and GAD-7. Furthermore, some of the ReSQue subscales were found to independently predict meeting the cut-off on both measures.

In relation to the C-ReSQue, high scores on three subscales: Forbidden Love, Theocentric Core Beliefs, and Religious Obligations Distress, were observed to be significantly associated with an increased probability of high depression scores, while the Eschatological Anxiety and the Forbidden Love subscales were associated with high anxiety scores.

For the A-ReSQue, high scores on three subscales: Theocentric Core Beliefs, Eschatological Anxiety, and Forbidden Love, predicted scores above the cut-off on the PHQ-9. Theocentric Core Beliefs and Eschatological Anxiety also predicted a high likelihood of scoring clinically significant anxiety scores.

Figure 5 *Adjusted Odds Ratios (AORs) and 95% Confidence Intervals (CIs) for the Predictive Power of Gender, ReSQue total scores and ReSQue Subscales on PHQ-9 Scores, Ordered by AOR value*

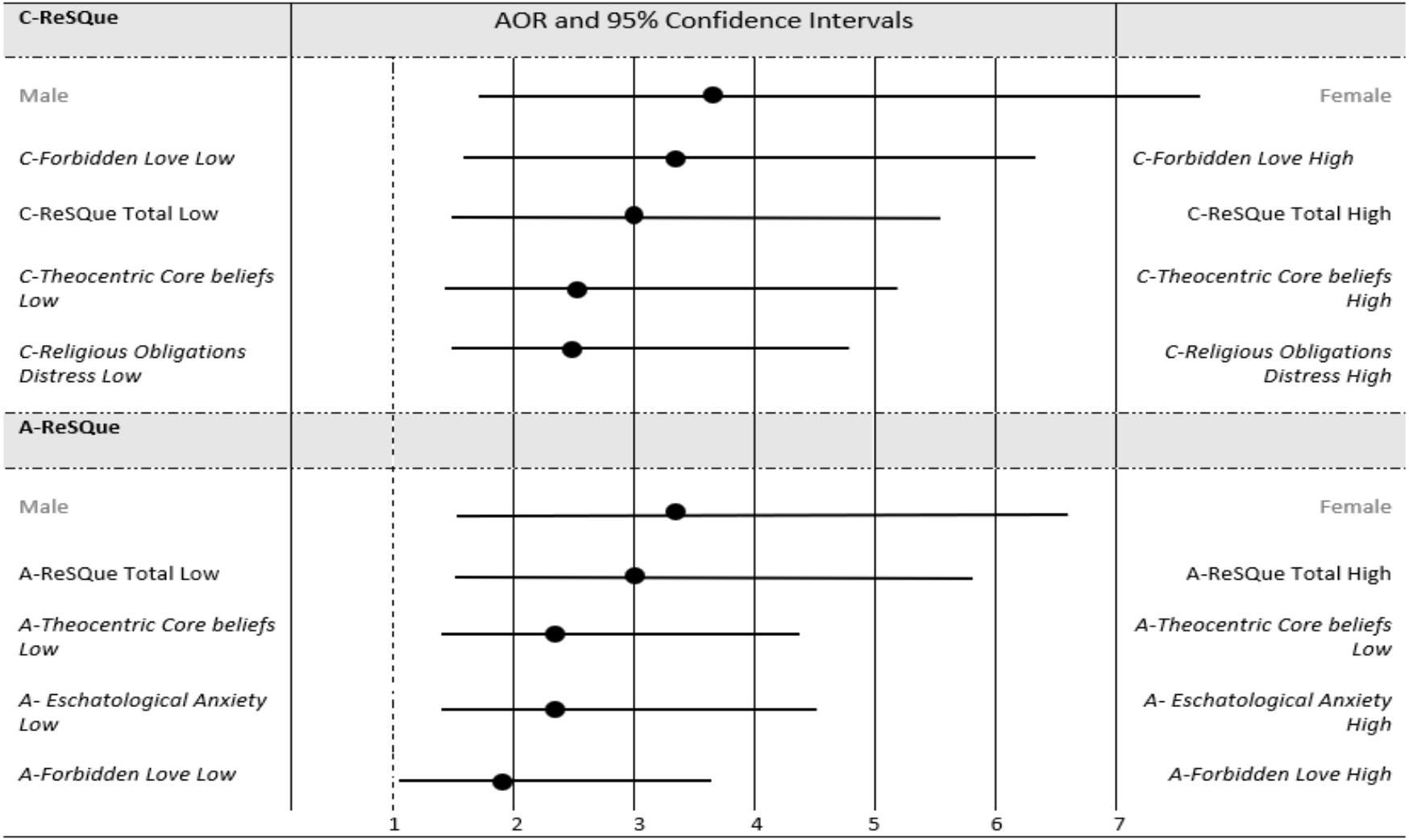
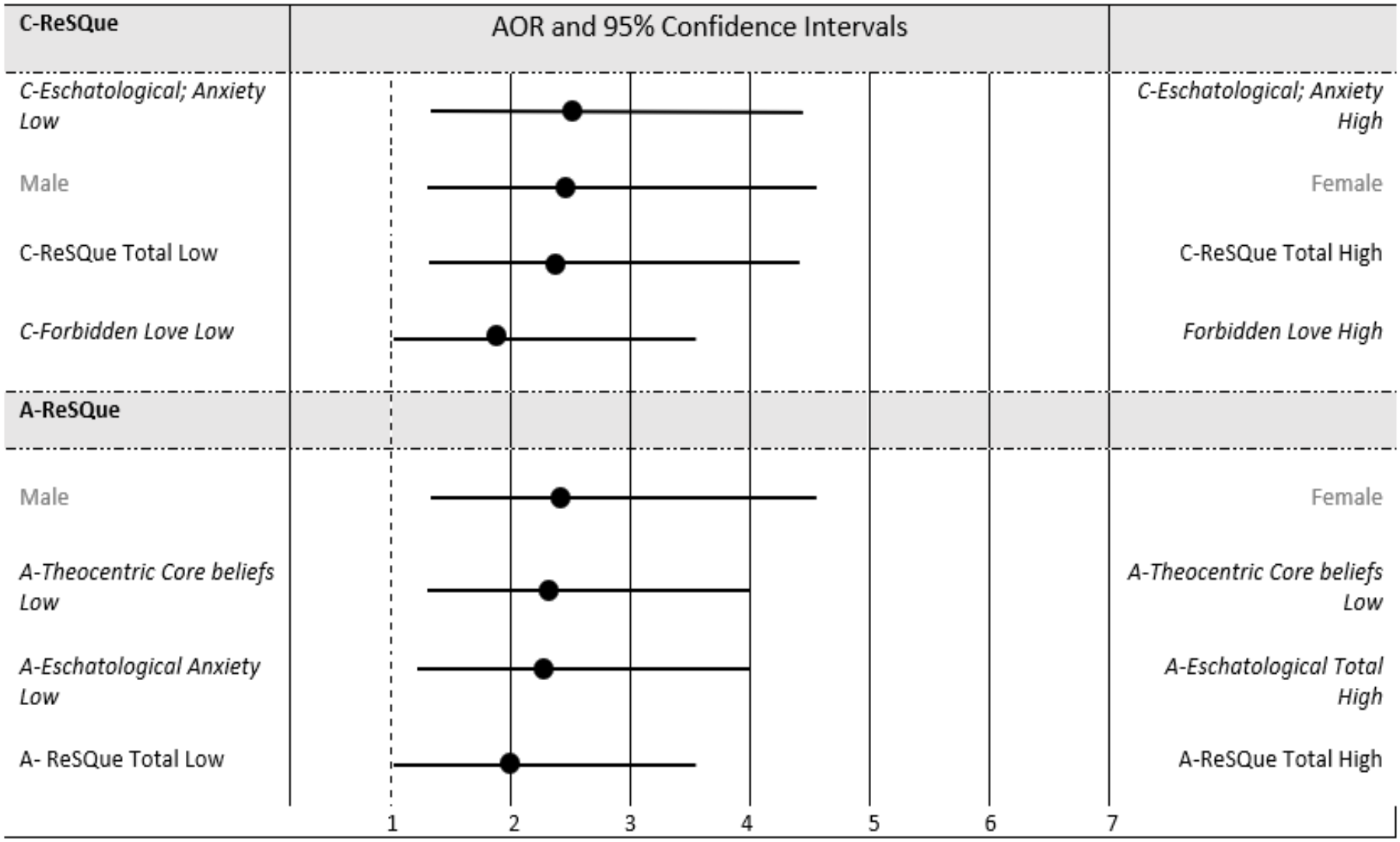


Figure 6 *Adjusted Odds Ratios (AORs) and 95% Confidence Intervals (CIs) for the Predictive Power of Gender, ReSQue total scores and ReSQue Subscales on GAD-7 Cut-off Scores, Ordered by AOR Value*



5.4 Discussion

The aim of this study was to explore potential relationships between maladaptive representations of religious schemata, operationalised through the Child and Adult versions of Religious Schema Questionnaires, and depression and anxiety symptoms (measured by the PHQ-9 and GAD-7, respectively) in an indigenous Muslim context.

Demographically, the results demonstrate a significant association between gender and both depression and anxiety symptoms, with being female significantly increasing the odds of meeting the cut-off for the symptoms of these disorders. Overall, the percentage of females scoring above the cut-off for depression was 57% and for anxiety 56%. This is in contrast to the proportion of males scoring above the cut-off on the depression screen, 28%, and above the threshold for clinically significant anxiety symptoms, 33%. The results corroborate existing research on the differential relationship among these common mental disorders between females and males reported in both local (e.g., Thomas et al., 2020) and international (e.g., Ritchie & Roser, 2018) studies.

Hypothesis 1

High scores on the C-ReSQue and A-ReSQue, (indicating stronger endorsement of a maladaptive religious schema) will be associated with above cut-off scores on measures of depression and anxiety.

Regarding specific factors investigated in this study, the findings suggest that high total scores on both the C-ReSQue and A-ReSQue questionnaires are significantly associated with meeting caseness for depression and anxiety, even after demographic variables are accounted for. Specifically, the results show that those scoring above the cut-off on the either of C-ReSQue or A-ReSQue scales are three times more likely to score above the cut-off on the PHQ-9, and more than twice as likely to score above the cut-off on the GAD-7. This finding lends support to the first hypothesis of the current study and aligns with previous research that underscores the role of religious beliefs in shaping mental health outcomes (Francis et al., 2019; McConnell et al., 2006; Rosmarin & Koenig, 2020).

As previously highlighted, negative religious coping, often assessed by the RCOPE (Pargament et al., 2011), which arguably consists of negative religious appraisals (Grey et al., 2023), has been associated with poorer mental health outcomes in a number of studies (Surzykiewicz et al., 2022). Furthermore, Abu-Raiya et al. (2015) found that religious struggle, as measured by the Religious and Spiritual Struggle Scale (RSS; Exline

et al., 2014), were positively correlated with depression and anxiety symptoms in the Muslim populations they studied. However, as far as I am able to ascertain, no previous study has identified specific religious schematic content or the nature of the association of such content with depression and anxiety among a relatively conservative Muslim population, making these findings a particularly important contribution to the literature.

Hypothesis 2

There will be similar patterns of influence on depression and anxiety between the C- and A-ReSQue subscales.

High scores on the C-Theocentric Core Beliefs (AOR = 2.64, $p < .01$) and A-Theocentric Core Beliefs (AOR = 2.39, $p < .01$) of the ReSQue were both found to be significantly associated with scores above the cut-off for depressive symptoms. This finding supports a central tenet of cognitive-behavioural theory (Beck, 1976, 1979; Beck et al., 2005) that emphasises the role of maladaptive core beliefs in the development and maintenance of psychological disorders, such as depression (Beck, 2011; Yesilyaprak et al., 2019). The core CBT premise of a relationship between appraisals and emotions has additional support in that scores in the upper quartile of the Forbidden Love subscale in both versions of the ReSQue were significantly linked to meeting the cut-off for depression (C-Forbidden Love: AOR = 3.20, $p < .001$; and A-Forbidden Love: AOR = 1.98, $p < .05$). This finding was initially surprising. However, upon re-examination of the ReSQue Forbidden Love subscale, it was found that both versions of the questionnaire contain items that describe feelings of shame with regard to having romantic feelings. Previous research has identified a significant effect for shame on depression symptoms (Andrews et al., 2002), thereby offering a potential explanation for the observed relationship between Forbidden Love and depression.

The apparent consistency of the Theocentric Core Beliefs subschema's influence across developmental stages in predicting depression is a significant finding for another reason. Namely, it provides evidence for Young's assertion that maladaptive schemata are enduring cognitive structures that remain relatively stable across the lifespan (Riso et al., 2006; Young et al., 2003). Moreover, the influential role of the A-Eschatological Anxiety subscale on GAD symptoms, and the similar impact of the same C-ReSQue subscale on anxiety, also suggest elements of continuity of this important component of religious schemata throughout life. Finally, as well as confirming aspects of Young's (2006) schema theory, these particular results also lend support to the findings of the main qualitative study of this thesis reported in chapter three, which highlighted the uniformity of core beliefs throughout various stages of life.

The relationship between high A-Eschatological Anxiety and meeting the generalised anxiety cut-off (AOR = 2.20, $p < .05$) is unsurprising, as studies have shown that existential concerns, particularly those related to death and the afterlife, gain prominence in adulthood (Abdel-Khalek, 2004; Vail et al., 2010). This may especially be the case when concerns about the afterlife are aggravated by religious interpretations that underscore the punitive aspects of religion (Abu-Raiya et al., 2015), including those pertaining to punishment in the grave and in the hereafter.

However, the significant relationship between the C-Eschatological Anxiety subscale scores and clinical anxiety (AOR = 2.47, $p < .01$) requires some reflection. For instance, from an Islamic point of view, the majority Muslim scholarly opinion, based on a famous hadeeth narrated in a number of the canonical Sunni hadeeth collections[8] (e.g., al-Sijistānī, 1969; Jamāz, 1990; Tirmidhī, 1970) plus the Musnad of Imam Ahmad (Hanbal, 2012), holds that a child is not *mukallaf* (religiously responsible) for their actions and therefore exempt from any form of punishment in this life or the next. So, the finding that childhood worries about life after death significantly predicts anxiety may be highlighting culturally specific emphases on perceived post-death tribulations, potentially causing these thoughts to manifest prematurely in the minds of the individuals' reported younger selves.

Hypothesis 3

There will also be divergence in the patterns of influence on depression and anxiety between the particular subscales of the C- and A-ReSQue.

As reported above, high scores on the Theocentric Core Beliefs and the Forbidden Love subscales in both the childhood and adult versions of the ReSQue were significantly associated with increased depression symptoms. Similarly, high scores on the Eschatological Anxiety subscale in both versions of the ReSQue were predictive of anxiety symptoms. However, there were divergent findings for other subscales in their capacity to predict common mental health symptoms. Specifically, high C-Religious Obligations Distress were significantly associated with depressive symptoms (AOR = 2.58, $p < .01$), whereas the corresponding subscale in the adult version did not predict meeting the cut-off for depression symptoms. Conversely, high scores on the A-Eschatological Anxiety were significantly linked to depression (AOR = 2.33, $p < .01$), while its counterpart in the childhood version was not predictive of this mood disorder. Additionally,

[8] Prophet Mohamad is quoted as saying: "The pen has been raised for three persons (meaning they are not held accountable for what they do): one who is sleeping until he gets up, a child until he reaches the age of puberty, and an insane person until he becomes sane." (Ahmad, Abu Dawud, At-Tirmidhi, An-Nasa'i, Ibn Majah, and Al-Hakim). Although The dates of publication cited above recent the canonical collection goes back to the 8th an 9th century CE.

anxiety was significantly related to Forbidden Love in the childhood version, (AOR = 1.94, $p < .05$), but not in the adulthood version. Conversely, high scores on Theocentric Core Beliefs in the adult version were significantly predictive of anxiety symptoms (AOR = 2.27, $p < .01$), but its childhood version was not.

The disparity in predicting high depression and anxiety symptoms between these C-ReSQue and A-ReSQue subscales perhaps implies that while religious beliefs encapsulated by the ReSQue remain largely stable at core, they also appear to undergo some change across the developmental stages (Fowler, 1981, 1996; Parker, 2010). Furthermore, the variation in the observed predictive pattern of depression and anxiety between the ReSQue subscales may also be explained by the neurotogenic dissimilarity in item contents across the various subscales. The subscales of the C- and A-ReSQue elicit varied beliefs, and according to CBT theory, would therefore elicit different emotions (e.g., Beck, 1976; Beck, 2020; Clark et al., 2000). This appears to be the case with Islamic religiously based appraisals and beliefs too (Ebrahimi et al., 2013), and the results of this study seem to provide some support for this contention.

Importantly, these findings support the third hypothesis of the study. The relationship between high C-Forbidden Love scores and clinically significant anxiety, when no significant relationship exists between A-Forbidden Love and anxiety, is an example of the variance in predictive influence exerted by distinct ReSQue subscales.

A possible explanation of this particular discrepancy could again be unique cultural interpretations of Islamic law within the current cultural context. Namely, the heightened anxiety witnessed during adolescence pertaining to romantic feelings (even if not acted upon, as the scale items clearly state), could stem from socially biased religious prohibitions against *any* experience of premarital amorous sentiments. Such prohibitions, accentuated by culturally-influenced extrapolations, could be seen as extending Islamic scriptural rulings intended specifically for intimate acts and behaviours (such as those outlined in Quran 17:32) to *all* forms of premarital romantic sentiments. This culturally based interpretation may inadvertently engender anxiety about mere romantic *feelings* when scriptural injunctions are clearly targeted at premarital or extramarital *sexual relations*.

Furthermore, the observed anxiety during this critical developmental period could also be attributed to a more complex interaction of phenomena. On one hand, it may arise from distress related to the prospect of violating certain interpretations of religious principles alluded to momentarily. On the other hand, it might, equally importantly, be related to fears associated with perceptions of transgressing *parental* and

societal norms (and not simply violating religious law). This apprehension about assumed transgression of social norms, coupled with significant hormonal changes due to physical sexual maturation, may be contributing factors to the heightened anxiety symptoms associated with adolescent romantic sentiments.

In adulthood, the landscape of anxiety in relation to Forbidden Love appears to shift, with receding influence of these beliefs on anxiety. This transition could potentially reflect changes in perceptions about the relevant religious teachings (through wider exposure to religious resources—including on the internet), faith developmental processes (Fowler, 1981), personal maturity, and importantly, relative autonomy from parental and societal control.

Another contrast between the outcomes of the different subscales was the discovery of a significant link between the high A-Theocentric Core Beliefs and elevated anxiety symptoms, and the absence of such link between the C- Theocentric Core Beliefs and anxiety. Revisiting items in the Theocentric Core Beliefs subscales in both versions of the ReSQue reveals that *all* three items of the C-ReSQue in particular arguably elicit clearly depressogenic theocentric beliefs (e.g. "I believe God saw me as a bad person," …that He "was disappointed in me," and that "…I was a bad Muslim, and this upset me"); whereas the A-ReSQue has two of these types of beliefs, but with a third item invoking beliefs about committing sin, namely: "God sees me as a sinner." This last category of cognition could be inducing feelings of anxiety (and fear) as a result of a possible secondary cycle of cognitions regarding the perceived severe consequences awaiting those regarded as sinful.

Among the two versions of the ReSQue, only the C-Religious Obligations Distress subscale was related to clinically significant symptoms of depression. Given the items in this subscale elicit beliefs invoking feelings of sadness due to being disconnected from God, and feelings of emptiness as a result of not fulfilling religious obligations, it unsurprising that high scores on this subscale predicted high depression scores. However, the inability of the same subscale in the A-ReSQue to predict significant symptoms of depression is unexpected, given the items in this subscale also elicit feelings of shame for committing irreligious acts or feeling guilty and 'bad' for not praying. One possible explanation is that in adulthood, a cognitive shift occurs with regards to religious obligations due to cognitive maturation and faith developmental processes (Fowler, 1981), leading individuals to no longer perceive religion as merely a set of obligations, but rather as a source of deeper meaning.

Finally, the association between elevated A-Eschatological Anxiety and significant depression symptoms is worthy of note. Although typically, worry (elicited in the items of the Eschatological Anxiety subscale) is linked to anxiety (American Psychiatric Association, 2013), the apparent relationship between high scores on the A-Eschatological Anxiety subscale and clinically significant depressive symptoms could be explained in terms of the common finding that excessive worry is also frequently associated with depression (e.g., Muris et al., 2004; Parmentier et al., 2019). In the current context, worry about the afterlife. Another possible explanation for the co-occurrence of high A-Eschatological Anxiety and depression may be attributed to the shared (but differently expressed) characteristic of negative future orientation in both anxiety and depression (Miloyan et al., 2014). Eschatological anxiety reflects worry about the ultimate abode of the soul and possible punishment in the afterlife. Similarly, a negative future orientation in the form of feelings of hopelessness is well documented as a risk factor in depression (Abela & Sarin, 2002; Abramson et al., 1989; Marchetti et al., 2023; Panzarella et al., 2006).

This observation may be further reinforced when linking it to the finding of high scores on depression among those who also scored high on the A-Theocentric Core Beliefs (which include items like “God sees me as a sinner”) discussed above. It could be that believing oneself to be at core sinful, when coupled with fears about divine retribution for the sinful (expressed in the A-Eschatological Anxiety subscale), engenders an understandably pessimistic view of the future. Finally, the emphasis on long-term future orientation may not be as prevalent in childhood (Steinberg et al., 2009), thus the lack of significant association between C-Eschatological anxiety and depression.

5.4.1 Limitations

While the results of this study provide important and nuanced insights into the association between maladaptive religious schema and experiences of depressive and anxiety symptoms, it is important to consider them in the light of a number of limitations. Some of these shortcomings are related to the study design adopted, while others pertain to my relative inexperience during the data collection process.

In terms of methodological limitations, a cross-sectional design such as the one adopted in this study, inherently precludes any inference of causality. So, while there appears to be a relationship between maladaptive religious schemata and clinical symptoms of common mental disorders, it remains inconclusive whether religious schemata precipitate future vulnerabilities to depression and anxiety, or conversely depressive and anxiety symptoms lead to an increased likelihood of reporting maladaptive schemata. Given the relationship between the childhood version of the scale and current neurotic

symptoms, it could be argued that early maladaptive schemata have an influence on later development of the mental disorders under investigation. However, here another cross-sectional design issue needs to be considered: namely that of recall bias. For example, participants may not recall past experiences accurately (Bauer, 2014) or reinterpret them in the light of their current perspectives (Patihis et al., 2019). Moreover, individuals may have better recollection of certain types of emotionally salient events compared to others (Lalande & Bonanno, 2011). With these limitations in mind, future research should consider more longitudinal data collection strategies to better determine the direction and nature of any causal links between maladaptive schemata and mental ill-health.

Another constraint is the gender skewed and relatively young sample recruited for this study. This limitation was unavoidable due to the accessible sample pool in a university where the student population is predominantly young and of female gender. The largely female demographic does not reflect the overall gender composition of GCC countries however, where males in fact constitute 61.2% of the population and females 38.8% (GCC-STAT, 2021). Consequently, the generalizability of the findings to the broader religious and psychological dynamics of the target population may be limited. Kuehner (2017) highlight the impact of such a demographic skew, noting that women were about twice as likely to experience symptoms of depression as men. Thus, gender differences can significantly influence expression of psychopathology. Furthermore, the sample's relatively young demographic could also influence the study's results. Research suggests that young and emerging adults may deploy different coping mechanisms to older adults (Arnett, 2000).

The sample's composition—primarily young, educated females from a university setting—further restricts its representativeness of the diverse religious and psychological experiences prevalent in the wider Muslim community in the Gulf region. This limitation is worthy of note because individuals with different sociocultural, religious backgrounds, and educational experiences, such as men and older adults, may exhibit different patterns of maladaptive religious beliefs and struggles. These patterns are well-documented in the wider body of literature (e.g., Exline, 2013; Exline et al., 2014; Rosmarin et al., 2009). Finally, the gender imbalance and relatively young demographic issues in the study warrants further attention in the light of research indicating gender-specific religious experiences among young Muslim males and females (e.g., Kretschmer et al., 2024) and distinct faith developmental stages (encompassing unique challenges and perspectives) between emerging adults and older adults (Barry & Abo-Zena, 2014; Parker, 2010). All the above underscore the need for any future research to ensure the inclusion of a more representative sample in terms of both gender and age variables.

In addition to these sampling issues, the current study also relied solely on self-report measures. Although these tools are commonly used in research due to their practicality, they are subject to various forms of response bias, including social desirability, especially when investigating sensitive issues (e.g., Latkin et al., 2017; Teh et al., 2023). Self-report measures are also prone to what Russell & Russell (2021) call stress bias (being primed with stress inducing questions before completing a questionnaire). Due to my lack of experience, in every case the mental health screening questionnaires were presented to participants before the ReSQue. Consequently, it is possible that responses on the ReSQue were influenced by any negative mood or anxiety induced by the preceding mental health measures. To counteract this potential confound, future research designs should consider a counterbalancing approach where questionnaires are presented in varying orders across participants (DePuy & Berger, 2014). To collect more accurate assessments of mental health status, future research should also consider integrating other assessment methods, including perhaps clinical assessments.

Finally, while attempts were made to control for a number of demographic markers, certain unmeasured confounding variables, such as family history of mental ill-health, traumatic experiences faced earlier in life, and resilience-related factors could have indirectly influenced the findings. To ensure better accuracy moving forward, future research should factor in these extraneous variables where applicable to improve validity. Furthermore, attention should be paid to potential moderating and mediating factors to deepen insight into the complex interaction between religious schemata and mental health —especially those related to types of religiosity and any uniquely cultural (as opposed to religious) influences.

5.4.2. Clinical Implications

Despite the identified limitation, the results of the current study have a number of potentially important clinical implications. A more detailed discussion (and practical suggestions) on the clinical applications of the current thesis' findings as whole will be presented in the subsequent and final chapter. For the time being, it suffices to offer an overview of the key clinical takeaways from this particular study:

First, the findings of the current study suggest that clinicians should consider religious schemata when assessing and treating clients — especially those who hold strong religious beliefs. While religious beliefs may constitute resilience factors by providing clients with a sense of meaning (Koenig, 2012; Prieto-Ursúa & Jódar, 2020), and helpful distress coping mechanisms (Thomas & Barbato, 2020), misinterpretations of some religious teachings can also coalesce into unhelpful schematic structures. These maladaptive

religious schemata may confer vulnerability, predisposing and maintaining factors in psychopathology and should be addressed as part of the clinical formulation and treatment processes.

Second, results of the study confirm a potential relationship between aspects of maladaptive religious schemata and two of the most common mental health problems. This suggests that interventions tailored to address maladaptive beliefs may potentially be beneficial for some depressed and anxious religious individuals. For example, cognitive restructuring techniques to challenge more surface level negative cognitions (Wenzel, 2013) and deeper imagery re-scripting for core beliefs (Stopa, 2011) may be helpful when targeted at relevant *hot* cognitions. It is crucial, however, that this work is conducted with the utmost sensitively and care, and be client led. Importantly, sufficient knowledge and deep respect of the client's religious tradition are essential to ensure any schema modification work is carried out within the client's overall religious tradition.

Finally, the findings of the study also point to a difference in the influence of the various religious sub-schemata across developmental stages. As a result, clinicians should be aware of the need to tailor assessment and interventions according to the age of the client. For instance, when working with adolescents, clinicians should be attuned to any potential anxieties centred around sexual or romantic feelings experienced within the cultural context. On the other hand, issues related to worries about what happens after death should be considered as part of the assessment process for adult individuals. Targeted interventions creatively utilising existing CBT and schema focussed therapy techniques could then be used to address any emerging concerns.

CHAPTER 6: Clinical Implications and Practical Recommendations:

Reflective Insights into Maladaptive Religious Schemata Within a Cognitive Behavioural Therapy Framework

6.1 Introduction

This final chapter elucidates clinical implications and provides practical recommendations derived from the research conducted in this thesis. However, before discussing these implications in detail, it is important to explicitly address an aspect of the research that has, until now, been implicit - even to myself. My unique positioning as a practicing Muslim and an ethnic Arab raised in the West inevitably influenced the adoption of a perspective reflective of this background. While aspects of this positioning were articulated in the qualitative studies; it became increasingly evident that my identity has informed a distinct overarching methodology as the thesis evolved. Upon reflection on the entire thesis, and during the writing of this chapter, it became apparent that the implicitly adopted approach within the research merits explicit articulation. For it is anticipated that the elucidation of this approach will help the reader be better informed when evaluating any conclusions drawn from previous studies and the subsequent implications detailed in this chapter.

Broadly, the approach can be described as one that is religiously sensitive yet culturally curious. In other words, the utmost care is taken to respect religious teachings while simultaneously maintaining a critical and inquisitive stance towards cultural phenomena. Considering the reverence given to religion in the current cultural context, ensuring deference to religion also meant that the highest locally grounded ethical principles (embodied in religious teachings) were always upheld. This methodology also allowed for attempts at discriminating between religious factors and possible cultural influences on these factors. Such a distinction is crucial if analysis of maladaptive representation of religious beliefs is to be meaningfully attempted. This distinction underlies the Fundamental assumption that cognitive representations of religious beliefs are precisely that: 'representations' (often culturally influenced) and may not necessarily reflect ontic manifestations of religious teachings.

6.2 Brief Summary of Thesis Studies

Construct development and hypothesis testing involved a number of separate but complementary studies. The pilot study was a valuable first step towards testing the cultural utility of a research tool that allows for the identification of core representations of religious beliefs within a religious population. The Socratic Dialogical Interpre-view (SDI-v) functions included the refinement of a down-arrowing technique routinely used in Cognitive Behavioural Therapy (CBT) for use within a specifically research context. Feedback from participants and data gathered during the pilot study allowed for the finetuning of the tool and provided reassurance for its suitability in the current cultural environment.

The SDI-v was then used as an interview technique with a larger sample of participants in order to gain a better understanding of religiously relevant core beliefs. Interviews during this qualitative study broadly followed the overall structure applied in CBT assessment sessions; but with a focus on religious experiences. This took the form of information gathering regarding religious life during the different developmental milestones. An emotionally salient incident was then used to vertically descend to bottom line beliefs about how God is perceived to view the self, and how others and the world are seen from a religious point of view.

One of the most surprising finding of this study was the discovery that when asked about their perceived relationship with God and religion, using carefully considered open, non-leading questions, most participants reported what may be described as neurotogenic beliefs (i.e. beliefs that had anxiety or low-mood emotional correlates). For example, the vast majority described emotions of fear with regard to their relationship with God; guilt, sadness or fear in relation to religious obligations, and fear, guilt or shame associated with romantic feelings towards others. A final model was constructed to summarise the data and considered an adequate conceptualisation of religious schema within that particular sample. As briefly alluded to, initial indications of a potential link between internalised religious beliefs and depressive and anxious emotions began to surface at this early stage evidenced by the pervasive reporting of such experiences in relation to religious beliefs by the participants. However, this needed to be explored further with a larger sample before any firmer conclusions could be drawn.

After undergoing cultural acceptability analyses and modifications, data from the qualitative interviews were then used to construct a religious schema measurement instrument subsequently designated the Religious Schema Questionnaire (ReSQue). Striving for an indigenously grounded measure that was both culturally appropriate yet clinically sensitive was the aim behind developing the ReSQue. Two versions of the questionnaire were developed based on two theoretical considerations: First, in order to fulfil one of the definitional criteria for a schema, elicited beliefs (a core component of a schema) needed to demonstrate resilience across the reported stages of life. Second and conversely, it was important not to miss any potential relationships between religious schemata and mental distress by only including a measure for childhood beliefs alone or adult beliefs alone. Both needed to be assessed as religious beliefs are susceptible to some evolution across the lifespan (Fowler & Dell, 2006). The two versions of the ReSQue (childhood and adulthood) showed good psychometric properties and aligned with qualitative

findings, established psychological constructs and captured religiously themed neurotogenic beliefs in six identifiable subschemata.

The final study utilised the ReSQue as a measure to assess representations of religious beliefs with high scores on this scale considered maladaptive representations of such beliefs. Scores on both version of the ReSQue were then related to scores on two measures of common mental health problems. As predicted high scores on both versions of the ReSQue were meaningfully correlated with clinically significant score on the PHQ9 (depression) and GAD7 (anxiety). However, the pattern of correlation between the ReSQue subscales and the two mental disorders measures was not always as predicted and provided useful insights into potential nuanced cultural influences on religious beliefs that were discussed and which will require further investigation.

Findings from all the studies conducting in this thesis hold important clinical implications. Some of these implications pertain to the CBT clinical assessment stage, potentially contributing insights and tools for the evaluation process. Others inform formulation, offering useful inputs for the development of a religiously sensitive problem-based formulation. Additionally, specific findings propose useful guidance for treatment planning and intervention strategies. The following section will detail some of these clinical implication with practical suggestions provided where possible and broader recommendations proposed at the end of the chapter. Given the overarching framework of this thesis is rooted in the CBP, and since the focus here is on clinical implications, the subsequent discussion will be structured in accordance with the stages typical of a cognitive behavioural therapeutic process. Each section will begin with a discussion on the relevant aspect of existing CBT practice, followed by insights gained from the current research that could serve to augment or adapt such practice.

6.3 Clinical Implications

In considering the practical clinical implications of the research reported in this thesis it is important to first of all delineate the scope of the suggestions offered. Important research has been conducted and resultant therapists' manuals developed in the area of adapted CBT or 'ethno-CBT' with Muslim individuals. Particularly noteworthy is the excellent work by the Southampton group which addresses many facets of culturally appropriate applications of CBT with patients experiencing both common mental health problems (e.g., Naeem et al., 2009, 2010; Naeem, 2011; Naeem et al., 2012, 2013, 2014; Naeem et al., 2015; Naeem et al., 2019) and those experiencing more severe and enduring concerns (e.g., Naeem, Saeed, et al., 2015; Rathod et al., 2010, 2013). This body of work, summarised in Naeem et al. (2019)

includes emphases on the importance of religion and spirituality to Muslim patients both in terms of how mental illness is conceptualised- what Naeem et al. (2016) call biopsychosocial-spiritual model of illness, and perceptions about causes of mental illness (such as the evil eye, 'God's will', etc.) (Naeem et al., 2019). These issues will not be discussed here. However, their suggestions that cultural factors influence cognitive errors and dysfunctional beliefs will be discussed but from a different perspective to that highlighted by Naeem et al. (2019). Here the focus will be on how these dysfunctional beliefs, even if they have a presumed religious origin, need to be addressed due to the possibility that they may represent a misunderstanding of religious belief and hold clinical relevance.

Other aspects already covered by the Southampton group include for example, awareness of culturally appropriate language (Hays & Iwamasa, 2006; Naeem et al., 2013), poor accessibility to health care systems, recognising the importance of non-verbal cues in therapy, using family as a resource, utilising stories in therapy, therapy style (directive v non-directive), homework, the assumed preference for more behaviourally oriented techniques, structure of therapy etc. (Naeem et al., 2019) will not be explored further. Instead, the emphasis here will be on presenting suggestions, drawn directly from the current research, that may be helpful in specifically assessing and formulating maladaptive religious schemata. Additionally, some reflections, based on current findings, on potential uses of traditional CBT and schema techniques for modifying these unhelpful cognitive structures will be offered.

6.3.1 Clinical Assessment:

The primary objective of a CBT clinical assessment is to gain a collaborative (between client and therapist) understanding (formulation/conceptualisation) of the presenting problem (Westbrook et al., 2008). Assessments also sometimes include an evaluation of risk, suitability for treatment, psychometric assessments and screening for other concerns. A CBT assessment typically focusses on a detailed analysis of the presenting problem (including triggers, modifiers, cognitions, emotions, behaviours and sensations), maintaining processes (e.g., safety seeking behaviours, escape/avoidance, excesses or deficits in behaviours, cognitive distortions, short-term reinforcements etc) (Westbrook et al., 2008), early vulnerability and predisposing factors and impact of the problem on life. A schema focussed therapy assessment also adds identification of 'dysfunctional life patterns', triggers of early maladaptive schemata, an investigation into the childhood and adolescent origins of schemata, responses and coping styles to these schemata and assessment of the client's inherent temperament (Young et al., 2006). Both types of assessment do not routinely incorporate a review of religious beliefs and their potential influence on current cognitions, nor their possible deeper-seated schematic origins.

Rosmarin (2018) attempts to address this issue and recommends the inclusion of a spirituality and religion (S-R) based assessment that covers four important areas: 1) orientation, 2) functional assessment, 3) collaboration and 4) monitoring. The purpose of the first component, orientation, is to obtain consent from the client to discuss religious matters pertinent to treatment and proceed to open the topic with the client, to desensitize the client to discussing the subject matter, and ultimately to gather relevant information. Questions such as: "would you mind if I asked you about your S-R?"; "is S-R important in your life" (if yes, 'how so?') are examples of question formats (Rosmarin, 2018).

In the current thesis initiating a discussion about religious beliefs within the context of mental health research was acceptable to almost all participants. Permission was sought in each case to introduce the topic and responses were always positive. However, as noted in the pilot study, I cannot determine with any degree of certainty whether my positioning as a cultural outsider (perhaps helping participants to feel free from peer judgement) yet a religious insider (hence deeply respectful of religion) facilitated open discussion of these sensitive issues more freely than would otherwise have been the case. Nevertheless, approaching assessment of religious beliefs in this permission seeking manner overall seemed to be effective.

In terms of identifying specific beliefs the Socratic method was also useful when employed sensitively and creatively. Naeem et al. (2019) suggest that many non-western clients seem to be more comfortable with professionals giving directions and guidance. According to Naeem et al. (2019) in non-western cultural setting this directive style often instils confidence in the professional, thus, a more inquisitive and curious approach may not be effective without sufficient preparation. The learning gained from both the pilot study and subsequent qualitative interviews supports the need for preparation but points to the utility of the Socratic dialogue as a technique. During the agenda setting stage of the interview participants were explicitly informed that they were to be asked questions about their beliefs and that further questions may ensue depending on their responses; and whether that was 'ok' with them. Notably, the classic CBT Socratic questioning style (Padesky & Kennerley, 2023) and downward arrowing techniques (Kennerley, 2017) effectively revealed both core theocentric beliefs (and other religious core beliefs) and emotions. Participants found these methods to be acceptable as explicitly stated in their post interview feedback.

Nevertheless, two important observations are worthy of note. First, there were instances where participants were unable to identify personal core beliefs using the classic downward arrowing technique.

consequently, an alternative strategy was attempted and proved to be useful on such occasions. Namely, once sufficient emotional depth was achieved (i.e. vertical arrowing to emotionally salient cognitions) the question was asked: "assuming that to be true, what do think God thinks of you having done that (or being like that)?" This question almost invariably triggered a further emotional response indicating the presence of an underlying distressing belief. This "horizontal arrowing" (from a theocentric core belief to a personal core belief) was often a more fruitful strategy for identifying personal core beliefs than the traditional method of ultimately asking: "having done that" or "thought that", "what does that say about you?" or "what does that mean about you?". The other issue in using the Socratic questioning style was what Barrett (1999) calls "theological correctness". This is the tendency to recite religious doctrines rather than share personal beliefs and feelings. Surprisingly, this issue was effectively addressed with respectful yet direct challenges that 'named' what was happening and explicitly reiterated the request for *personal* feelings rather than *religiously expected* responses.

Finally, the ReSQue developed from the interview data could serve as an important psychometric tool during the assessment process. High Scores on each version of this measure (i.e., C-ReSQue scores > 71; A-ReSQue scores > 69) were found to be predictive of depression and anxiety caseness scores. Given their initially encouraging psychometric properties these measures could be advantageous during the clinical assessment process to augment, or indeed initiate, further discussion on the presence and types of maladaptive religious schemata held by clients.

Investigation of representations of religious beliefs across self-reported life stages highlight the importance of adjusting schema assessment in accordance with the age of the client. For example, when working with children focus should be on their perception of God and religious obligations. During adolescence the issue of romantic love should be explored as a possible correlate of anxiety and/or depression, while in adulthood concerns about the afterlife may warrant evaluation. As stated previously the purpose of assessment is a comprehensive formulation of the problem that should include both personal and transpersonal factors so that a targeted treatment plan can be devised.

6.3.2 Formulation:

A Formulation is necessary for the competent practice of CBT (Beck, 2011; Kuyken et al., 2009; Persons, 2012) because it helps the client and therapist make sense of what can sometimes seem like a confusing collection of symptoms (Westbrook et al., 2008). Although the scientific case for case conceptualisation

(used here synonymously with formulation)[9] is yet to be made (Easden & Kazantzis, 2018), there is widespread agreement among professionals in the field that formulations serve as a useful framework for bringing together all the important elements of the presenting issues (Easden & Kazantzis, 2018) and inform treatment planning (Nezu et al., 2004). Westbrook et al. (2008) working definition of formulation is a useful one. They define a formulation as the use of the CBT model to develop a description of the current problem(s), why the problem(s) developed and what is hypothesised to be maintaining it (them). A formulation, in a sense, is a summary (in CBT often a visual representation) of the key findings of the assessment that is shared with the client for confirmation (Kuyken et al., 2009). A CBT formulation is not meant to capture the entirety of a client's life or personality but only those elements that may be significant to the presenting pathology (Easden & Kazantzis, 2018).

As previously stated standard CBT formulations do not typically include an assessment of religious or spiritual components pertinent to the problem (Rosmarin, 2018). Research conducted in the course of this thesis suggests that unhelpful representations of religious belief warrant examination due to their association with depression and anxiety symptoms. These beliefs seem to have a childhood aetiology and although undergo some peripheral transformation, remain at core stable throughout life.

The conceptual model derived from the qualitative study, generally substantiated during the questionnaire development study, and modified in the light of findings from the final cross-sectional study focuses exclusively on schematic and sub-schematic structures. As mentioned earlier, a typical formulation includes not only beliefs and emotions but behaviours, body sensations and other dimensions (Young et al., 2006). The models presented below do not account for behaviours, as the primary aim was simply to identify maladaptive cognitive schemata (and thus perhaps may be better described as cognitive, rather than cognitive behavioural, models). Regardless, by identifying cognitive content and associated emotional states, these models make a valuable contribution to cognitive therapeutic formulations for particular maladaptive religious schemata. This contribution elucidates specific cognitive content, as well as the relationship between this content—namely, misinterpreted religious beliefs—and associated emotional distress. Well-defined cognitive content was often lacking from much of the literature on religious beliefs and psychological distress among Muslims as revealed by the literature review conducted

[9] The author is aware of the sometimes-subtle differences between a 'formulation' and 'case conceptualisation 'such as the more popular use of the term formulation in the UK and case conceptualisation in the US for example. Also the fact that case conceptualisation can refer to a process that seeks to understand the 'whole person' where a formulation is often targeted at a specific problem (Sturmey et al., 2019). For the purposes of this section conceptualisation and formulation are used synonymously and will be taken mean presenting problem formulation.

in chapter 1 (see sections 1.3.4). The final schema models developed across the three main studies of the thesis are presented in Figures 7 and 8.

As can be seen maladaptive theocentric core beliefs are on the whole consistent across the models in terms of both the general content and influence of these maladaptive beliefs on depression. Maladaptive theocentric core beliefs are also implicated in anxiety in adulthood. Eschatological anxiety's relationship to anxiety in childhood and to both anxiety and depression in adulthood is also highlighted in the models. Forbidden love is another important feature of the model as it was shown to be related to both depression and anxiety in childhood and to depression in adulthood. Finally, the 'Religious Obligations Distress' significant relationship to depressive symptoms in childhood warrants its inclusion in the final maladaptive religious schema model.

Figure 7 *Final Childhood maladaptive schema conceptual model*

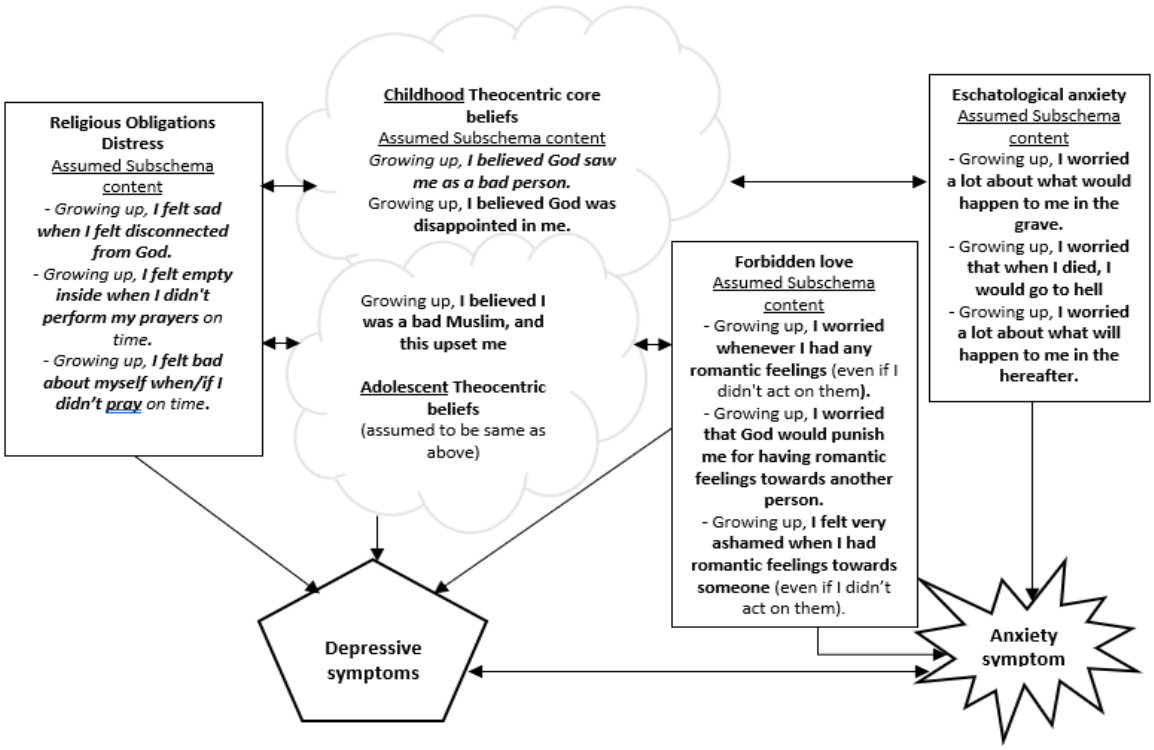
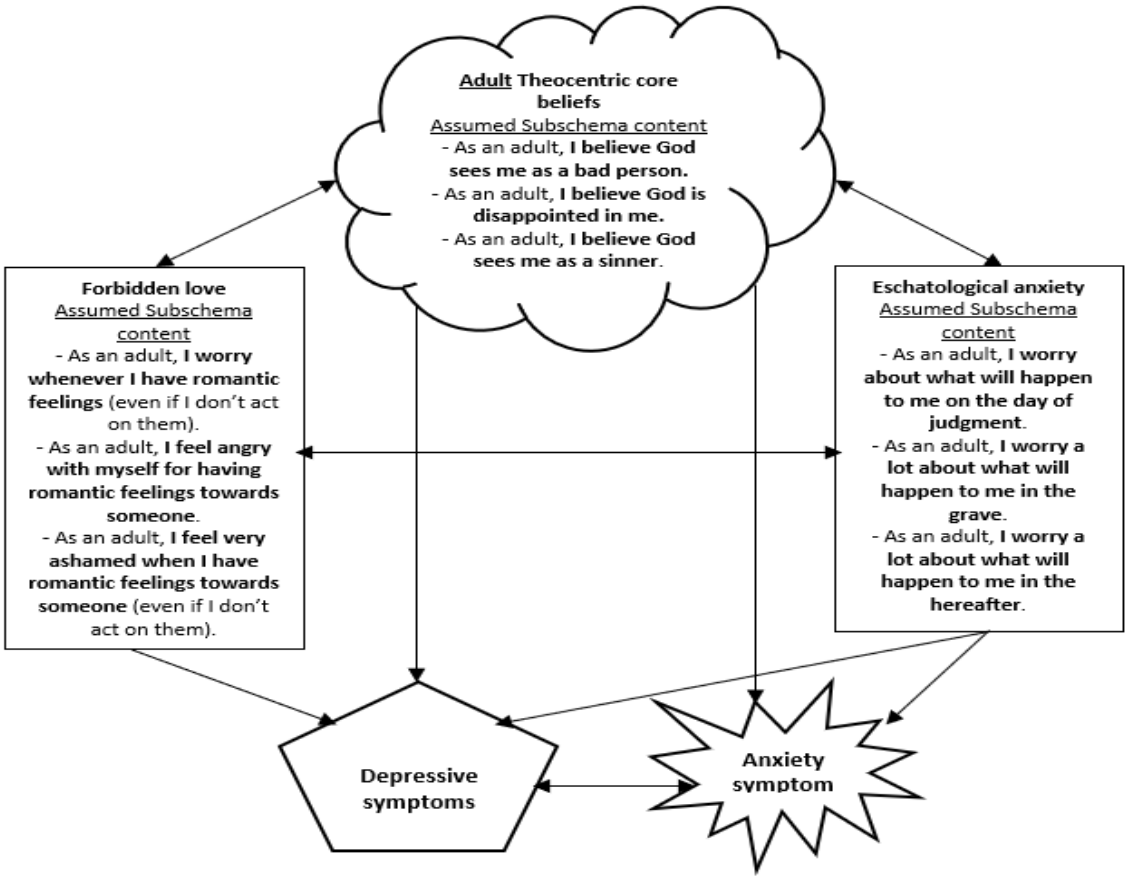


Figure 8 *Final adult maladaptive schema conceptual model.*



6.3.3 Treatment Planning and Client Engagement:

As highlighted above a CBT formulation serves the function of 'making sense' of the presenting problem, understanding its origins and determining its maintaining factors within a relevant theoretical framework. Assuming it is developed effectively and collaboratively (Osborne & Williams, 2016) a formulation is also crucial in planning treatment and deciding which strategies are likely to be helpful and which otherwise (Eells, 2007; Johnstone & Dallos, 2006). There is some empirical evidence that well informed idiosyncratic treatment planning has beneficial clinical outcomes. For example, in a study by Johansson et al. (2012) it was shown that participants with severe depression who received individualised treatment plans experienced more favourable outcomes compared to those who did not.

Considering the maladaptive religious schema model introduced above, it is evident that, for the samples studied, four specific domains of beliefs should be targeted for intervention: Maladaptive Theocentric Core Beliefs, Eschatological Anxiety, Forbidden Love and Religious Obligations Distress. These domains, or

subschemata, may represent particularly sensitive areas to target, thus making the process of client engagement and socialisation to the model a particularly important component of therapy.

Client engagement in therapy is generally associated with better therapy outcomes (Gan et al., 2021; Glenn et al., 2013; Hundt et al., 2014; Neimeyer et al., 2008). Bijkerk et al. (2023) identify three dimensions to client engagement: behavioural, cognitive and affective engagement. They suggest that behavioural engagement is determined by the client's active involvement in using the intervention and adhering to it. Adherence in turn is defined by Bijkerk et al. (2023)as: "the degree to which clients use interventions as intended" (p.156). This is typically manifested through indicators such as session attendance and homework adherence (Sabaté, 2003). Cognitive engagement on the other hand pertains to how the clients perceive the treatment rationale and whether they agree with it (Bijkerk et al., 2023). Affective engagement relates to the client's subjective emotional response to the intervention (Perski et al., 2017, cited in Bijkerk et al., 2023).

When working with any client, but perhaps especially with religious clients (targeting maladaptive religious schemata) it may be helpful to closely track the three indicators of engagement described above in order to assess whether clients are actively participating in therapy. Monitoring these cognitive, behavioural and affective markers throughout therapy can provide an indication of the degree to which a client is engaged. Behavioural engagement may serve as a particularly useful measure as some non-Western clients may overtly 'conform' to therapy through 'respect' for the professional (Naeem et al., 2019) rather than actual conviction in the treatment's utility.

Factors that facilitate client engagement include familiarity with the religiously observant client's tradition (Rosmarin, 2018). As outlined in chapter 1, section 1.1.6, of this thesis religious Muslims can follow a number of different *madhhabs* (jurisprudential traditions), *aqeeda* (doctrinal) schools, *tariqas* (Sufi/spiritual paths) etc... Signs from the therapist demonstrating an understanding of religious and theological nuances can foster trust in the therapist's knowledge of the clients often most precious aspect of their life. Throughout the interviews in both the pilot and main qualitative study I purposefully capitalised on moments when the clients spoke about facets of their faith to mention a religious technical term or a relevant Quranic *ayah* (verse) thereby demonstrating my intimate familiarity with the tradition. This strategy was noticeably well received by participants and seemingly encouraged them to engage further and more deeply in the discussion.

A practical strategy relayed by Rosmarin (2018) that could be employed to increase engagement and simultaneously socialise the client to the CBT model involves presenting the conventional CBT model (illustrating the interconnection between thought, feelings and behaviours). The client can then be asked if they knew a Quranic verse, a prophet Hadeeth, a *sahabi khabar* (saying of a disciple) or other religious teachings that might affirm this way of thinking. This discussion can then be expanded to include maladaptive religious schemata, all the while being careful to draw a distinction between religious teaching in themselves and how the client may have internalised them. When appropriate a Socratic enquiry can commence to ascertain whether the client is willing to explore if these unhelpful representations of beliefs are consistent with religious teachings.

6.3.4 Intervention Strategies:

CBT Therapeutic techniques encompass both interpersonal and technical components (Kazantzis, Luong, et al., 2018). Some of the interpersonal aspects have been alluded to above. But explicitly they include skills such as expressing genuine empathy, building therapeutic alliance and effectively eliciting client feedback (Kazantzis, Luong, et al., 2018). These elements have demonstrated their effectiveness in a number of meta-analyses. For example, empathy, simply defined as a person's ability to understand what another person is feeling or trying to express was found by Elliott et al (2018) to be a moderately strong predictor of therapy outcome. Similarly, building a strong therapeutic alliance was a demonstratively effective component of the therapeutic process (Horvath et al., 2011) as was collecting client feedback (Lambert & Shimokawa, 2016).

These interpersonal factors constitute what Kazantzis et al (2018) call in-session processes[10]. Their review of meta-analyses of studies into the processes of CBT determined that the strongest evidence for favourable therapy outcome was the role of the alliance (n = 8 meta-analyses) and homework assignments (n = 6 meta-analyses). While the significance of in-session processes cannot be overstated, given the ample literature on the topic and the constraints of space for this final discussion focus will be directed solely towards 'treatment processes'[11] (Kazantzis, Luong, et al., 2018) relevant to the current research findings.

[10] In-session processes as defined by Kazantzis et al (2018) include alliance, goal consensus and collaboration, feedback, group cohesion, and homework.

[11] Treatment processes examined by Kazantzis et al (2018) review of metanalyses include: CR, behavioural strategies, emotional regulation, motivation strategies, and psychoeducation

With regards to treatment processes Kazantzis et al (2018) found that cognitive strategies (n = 8 meta-analyses) and behavioural strategies (n = 3 meta-analyses) were the most effective for producing positive change in CBT for depression and anxiety. As previously explained behavioural techniques will not be discussed here. However, recommendations for an application of classic cognitive reappraisal/restructuring technique informed by the current research findings will be proposed:

Cognitive Restructuring

Cognitive restructuring (CR) lies at the heart of CBT techniques. Beck et al (1979) summarise the technique as follows: 1) identifying negative automatic thoughts, assumptions or core beliefs, 2) helping the client recognise and appreciate the link between these cognitions and distressing emotions, 3) examining any evidence for and against these unhelpful cognitions. If achieved successfully, then 4) substitute the negatively biased thoughts and beliefs with more 'reality-orientated interpretations', thus affecting change in the emotional experience associated with these beliefs. Standard CBT evidence collection is a client led process but Socratically guided by the therapist, with the evidence collected usually derived from the client's lived personal experiences and objective references.

With regards to maladaptive religious schemata the internalised religious beliefs (according to the current research data) were usually explicitly and consistently imparted to the individual by significant others. So challenging personal interpretations of what the client had heard may not be a fruitful strategy to pursue. Instead, it might be more productive to challenge the original message instead, on religious, and not on personal grounds. In doing so it is important to appeal to the Quran as a source of evidence over and above any other religious text[12]. This is so for a number of very important reasons: 1) There's almost unanimous scholarly consensus that the Quran is the highest source of religious authority and the only text considered scripture in Islam. So, any evidence derived from the Quran supersedes all other religious evidence. 2) the same Quranic text, with extremely minor variations between the different *qura'at* (recitation conventions), is agreed upon by all Muslims. So, using this text a therapist can be reassured that there will be no disagreement on different versions of a text. 3) Other religious sources such *hadeeth*, *seerah* (prophet's biography), *tafsir* (Quranic exegesis), *aqwal al-sahaba* (sayings of the companions of the prophet) etc. are all subject to both cultural and historic influences and are therefore not agreed upon by all Muslims. 4), there are texts within the non-Quranic sources that support currently maladaptive

[12] Or ijma' ul-*umma* (universal Muslim consensus across all sects and mathabs) when there is one. Ijma' ul-umma is distinguished from specific sectarian ijma' ul-mathab (within-school of jurisprudence s consensus) or ijma' ul ta'ifah (within-sect consensus). On religious ruling and doctrine, one should resort to only the Quran or those articles of faith that is ijma'ul umma.

(unhelpful in the current historic context) interpretations of Islamic teachings. 5) finally, and perhaps most importantly a thorough study of the whole Quran in the original Arabic has yielded direct challenges to all the maladaptive neurotogenic religious schemata endorsed by participants in the previously reported studies.

To give just one example of the last point made above, the Quran speaks considerably more extensively about God's mercy, compassion and grace than His wrath. In fact, a search of the holy text (again in the original Arabic) revealed that God's compassion and grace is mentions nearly 10 times more than that of His anger and wrath. This is not including the fact that 113 chapters (out of a total of 114) of the Quran begin with the phrase: 'In the name of God the most compassionate, most merciful'[13]. This is the case when one analyses the general ethos and bias of the Quran. In fact, the Quranic Karma (if such a phrase could be used in this context) is that a good action attracts ten times more grace than the act is worthy of, while a bad deed only attracts the likeness thereof (Quran, 6:160).[14]

When considering Quranic verses addressing believers (*Mu'minun*) in particular, there is not a single occasion when the Quran promised them punishment. There are instances when believers are cautioned against 'transgression' but they are never promised hell fire. Punishment, when mentioned is always reserved for those who transgress against others (e.g., Quran 4:93); carry out evil deeds (e.g., Quran, 14:42), intentionally conceal truth (e.g., Quran, 2:159), deny it after it has become clear to them (e.g., Quran, 46:7) etc. However, those who profess faith and do good are always spoken about with love, always forgiven and showered with blessings (e.g., Quran, 19:96, 2:195, 3:76 etc). Although these conclusions seem obvious, it appears that it requires reinforcement with some clients given the finding that a significant number of self-reported devout believing participants seem to hold negative theocentric core beliefs (such as 'God sees me as a bad person') and experience significant eschatological anxiety.

However, when working clinically with these maladaptive theocentric and eschatological anxiety subschemata, genuine guided discovery (Kennerley, 2017) should be used at all times. A client presenting with the belief that 'God sees them as a bad person' could first of all be asked whether they would describe themselves as a believer? Then perhaps to find out if they, to the best of their ability, try to do good? Then

[13] The missing one phrase is not lost but embedded in a different surah to the one from which it is missing. Thus, making the *basmalah* (compassion and mercy formula: 'In the name of God Most Compassionate, Most Merciful;) in fact ultimately recited 114 in total.

[14] 'Whoever shall come [before God] with a good deed will gain ten times the like thereof; but whoever shall come with an evil deed will be requited with no more than the like thereof; and none shall be wronged' Quran (6:160)

to elicit from them why they draw the conclusion that they are seen as 'bad' by God. Finally, to elicit reasons for why God may not see them as so bad and reinforce this with a thorough consultation of the scripture for homework perhaps.

In terms of targeting the unhelpful beliefs contained in the Forbidden Love subschema work could begin with establishing the scope of prohibition outlined in the Quran. Using guided discovery and consulting the holy text the client may discover that the Quran *only* prohibits extramarital *physical* sexual acts (e.g. Quran, 17:32, Quran, 4:15). Nowhere in the text is there a prohibition on romantic sentiments towards others. If a clients is onboard with this Quranic understanding further progress could be achieved by appealing to the popular concept commonly used in work with OCD clients of *Thought-Action-Fusion* (TAF) (Craig & Lafreniere, 2016; Rachman, 1993; Shafran et al., 1996). Particularly pertinent here is what Rachman (1993) calls 'Morality' TAF. This form of TAF is the belief that the occurrence of immoral intrusive thoughts implies, necessarily, an equally immoral character (Gjelsvik et al., 2018). In other words, simply having an immoral *thought* means the person is at core immoral. This concept may be introduced Socratically to the client as a second line of intervention to further challenge the belief that having romantic feelings makes them a bad person. By distinguishing between having the feeling and being a bad person, (emotion-action-*diffusion*) a client maybe better able to tolerate such sentiments. Therefore, through first scripturally questioning the belief that having romantic feelings alone is prohibited; then if necessarily a discussion about the lack of moral equivalence between thoughts and feelings on the one hand and behaviour on the other, the process of adjusting the underlying Forbidden Love sub-schematic beliefs may commence.

Schema-Focused Therapy Techniques:

Cognitive restructuring is an effective technique in challenging unhelpful beliefs (Kazantzis, Luong, et al., 2018). However, according to Young et al. (2006) experiential techniques such as imagery techniques are more effective for chronic beliefs (i.e. those that are especially emotionally salient and have an early childhood aetiology). Experiential technique seem to produce more dramatic change over a shorter period of time and capitalise on the human tendency to process information more deeply in the presence of affect (Young et al., 2006). While some have argued for experiential techniques (e.g. imagery rescripting (ImRs)) to be proceeded by CR, there's some preliminary evidence to suggest that CR prior to ImRs may actually not make a difference (Voncken et al., 2023). Furthermore, when comparing ImRs with CR in the treatment of depression for example, ImRs was equally, if not in fact more effective, than CR in treating symptoms of depression (Ma & Lo, 2022).

There are many variants of imagery techniques, but given the limited space remaining, only one form, a type of Imagery rescripting called 'imagery dialogue' (Young et al., 2006), will be briefly discussed and proposed for consideration when working with clients who hold deeply rooted maladaptive religious beliefs. In applying the technique with a client with a strong Religious Obligations Distress subschema for example, the work could begin with a prior examination for the evidence for and against[15] the need for a child to be obliged to carry out religious duties, and the unjust warnings of hell fire received in case of disobedience to this unwarranted demand.

Given the depth of the work involved in imagery dialogue, the sensitivity of the schema content and the specific cultural context in which the technique is proposed for application, the following considerations need to be carefully attended to: a) that in collecting evidence the position of the therapist must always be to align themselves with the religious client's ultimate aim - which is often to regain and experience joy in their religious practice and to develop a loving (rather than a fearful) relationship with God; b) to clearly explain to the client the rationale of this technique: namely, to gain a more emotionally felt sense of the challenges rather than to simply appreciated them at an intellectual level alone; c) to encourage the client to express any emotion that arises during the imagery dialogue including, and perhaps most importantly, emotions of frustration or anger (Young et al., 2006).

The last point will require special attention as what might be indicated therapeutically within a Western context, namely the necessity of expressing anger toward the significant other (Young et al., 2006), may not be culturally acceptable. In such cases the client could be reminded that this exercise is aimed at the mental representation of the significant other, who unfairly burdened them with an inappropriately heavy obligation at such a young age, and not the person themselves. Furthermore, it should be explained that expressing anger towards the person does not equate to contempt for the person, but rather anger at a particular error they made. If these suggestions remain unacceptable to the client then an adapted version of the technique could be applied (one that Young et al. (2006) recommend for clients with a defectiveness/shame based schema). This would involve the insertion of a pre-agreed upon respectable religious figure – be they contemporary or historical - whom the client has special love and reverence for. In the context of the imagery dialogue this figure could hold the client's hand, reproach the erred individual for the unfair, and religiously unwarranted demands on the child, and communicate any phrases that the

[15] Evidence in this case does not have to be from the Quran alone but can be derived from *fiqh* (Islamic jurisprudence) because here there is *Ijma'* (Scholarly consensus) that children are not *mukallaf* (religiously obliged).

client wishes to articulate. The ultimate objective is to modify the existing schema by appreciating that God loved the client as a child (and continues to do so) and that God was not expecting anything from them in their childhood except to be free and joyful. The session should be concluded with a comprehensive review of the imagery exercise and discussion of any remaining 'hot spots' that may require further attention.

6.4 Empirical Evidence for Propose Interventions:

Cognitive Restructuring

A more detailed discussion on the cultural application of CBT in Arab Muslims contexts is provided in Chapter 1, sections 1.3.1 to 1.3.3. This section will therefore focus entirely on the interventions proposed above, briefly highlighting empirical evidence in support of these techniques and identifying potential adaptations.

Although a number of studies based on small samples report the utility of culturally adapted cognitive restructuring for Arab Muslims clients (Bahari & Muzafar, 2019; Fitriyana & Merida, 2023; Hamdan, 2008; Hays & Iwamasa, 2006) more robust evidence is provided by Stein et al. (2023) RCT. In this study a total of 365 Arabic speaking participants from the MENA region with a primary diagnosis of PTSD were allocated to either a cognitive restructuring treatment (n = 118, 32%), exposure treatment (n = 122, 33.4%), or a waitlist control group (n = 125, 34.2%). As well as symptoms of PTSD, symptoms of depression, anxiety, and other indices were assessed. 61.5% of those starting treatment completed it with no significant associations found between conditions (exposure vs. cognitive restructuring) in terms of dropout rate. High satisfaction rates were reported with no significant differences between the treatment conditions. Importantly, in both treatment groups, there was a significant reduction in the severity of PTSD, depressive and anxiety symptoms. Additionally, there was a marked improvement in quality of life from the start of the treatment to after its completion, with all these changes being statistically significant ($P \leq .001$). Although treatments were delivered online this study provides evidence that cognitive restructuring is both applicable and efficacious for Arab individuals.

Relevant cultural adaptations made to the original 'Interapy' protocol by Lange et al. (2003) used by Stein et al. (2023) included the translation of text into Modern Standard Arabic with gender-specific variations to respect linguistic nuances. The use of pictorial metaphors and a directive writing style made the therapy more culturally accessible; and for participants with strong religious beliefs, quotes from the Qur'an were incorporated, blending the treatment with cultural and religious sensitivities (Stein et al., 2023).

Finally, while the findings of the research cited above show promise it is appropriate to reflect on two important considerations: first, the efficacy of the treatment may well vary across Arab Muslim population, where cultural nuances (Alharbi et al., 2021), dialectical variations, and different interpretations of religious teachings can impact therapeutic outcomes. Second, as mentioned above the online mode of delivering the therapy might differ from face-to-face formats in terms of treatment outcomes.

Imagery Rescripting

With regards to the other intervention suggested above, imagery rescripting (within the context of an overall schema therapy model) contributed to the successful treatment of a complex case reported by Barbieri et al. (2022). This case involved a 38-year-old Yemeni man, a refugee in Italy, who was diagnosed with Dissociative Disorder, PTSD, and Borderline Personality Disorder, having endured sexual abuse both in childhood and as an adult. The client underwent ImRs sessions starting with session 54, where he expressed deep-seated anger and shame and during ImRs received consolation through various self-representations and the therapist's intervention. This technique significantly reduced his entrenched hatred towards the abuser and led to improvements in self-control, anger management, and social relationships. The client's ability to manage his dissociative and posttraumatic symptoms also significantly improved. A follow-up session showed the client's further progress, where he reported independently providing protection and compassion to his younger self, demonstrating the effectiveness of ImRs in his long-term recovery process. (Barbieri et al., 2022)

In a larger multiple baseline case series study, Arntz et al. (2013) applied imagery rescripting (ImRs) to treat complex PTSD and secondary depressive symptoms in 10 participants, of whom 60% were Muslim individuals. The treatment technique showed a strong effect on PTSD-symptoms as assessed by the Posttraumatic Symptom Scale (PSS; Foa et al., 1993) (PSS;), and on the secondary outcome of depressive symptoms, measured by the Beck Depression Inventory version 2 (BDI-II) (Beck et al., 1996). Significantly, Arntz et al. (2013) report that patients from different cultural backgrounds and holding various religious beliefs showed 'excellent' (Arntz et al., 2013, p. 282) acceptance for the treatment. Again due to the relatively small number of participants in the study the evidence provided for the effectiveness of ImRs with Muslims is by no means conclusive although this pioneering study does provide promising results. (Stein et al., 2023) argue that the success of ImRs may be due to the fact that this technique is tailored to

the idiosyncratic needs of each patient instead of following a rigid manualised protocol. The intervention is thus adaptable to suit the cultural and religious background of the client.

In conclusion, the preliminary evidence presented above suggests that the proposed interventions may be suitable for use with Muslim clients. Earlier in the thesis, appropriate cultural adaptations for implementing CBT were discussed. Generally, the literature seems to suggest that only minor modifications to the techniques themselves are required (e.g., Algahtani et al., 2019; Amer & Jalal, 2013). However, a more comprehensive understanding of cultural nuances maybe important for the application of other broader aspects of therapy (e.g., translation of therapy written material, access to services, family involvement, gender dynamics etc.) (Naeem et al., 2019)

6.5 Recommendation for Interprofessional Collaboration:

Given the religious and cultural aspects of this research, and the implications of them for clinical work with religious individuals, collaboration with religious scholars, community leaders, policy makers and educators will be of the utmost importance. The following are recommendations drawn from the implications of the current research in this regard:

1) Share with religious and community leaders findings from this research and others (e.g., Abu Raiya et al., 2008; Abu-Raiya et al., 2018; Abu-Raiya & Pargament, 2015) on the negative mental health impact of certain misrepresentations of religious teaching (e.g., over-emphasis on God's punishment, religious obligations on children, focus on God's wrath rather than His compassion, perceptions of Him as being judgements and punitive rather than forgiving and merciful etc.)
2) Advocate for clients by articulating their concerns and what they commonly share in the therapy room (while maintaining anonymity and following informed consent at all times) with regards to certain teachings as being a source of distress for them.
3) Discuss with religious and community leaders the role of public religious discourse in helping to alleviate these sources of struggle by exploring the potential for emphasising the more *jamali* (beautific) aspects of the divine especially in *khutbat ul-Ju'ma* (Friday sermons) and religious education classes for children.
4) Collaborate with religious leaders to foster a more supportive environment for those struggling with depression and anxiety and explore the possibility of signposting individuals to reputable mental health clinics.
5) Identify willing and suitably qualified imams and religious leaders who could be consulted or even invited into the therapy room when appropriate, to discuss religious evidence against unhelpful

beliefs. This however must be done with extreme caution (Naeem et al., 2019) and with prior discussion about the precise role of the imam and the fact that they will refer only to the Quran (unless there is ijma') needs to be clearly agreed beforehand.

6) Develop training workshops for religious and community leader where they can learn more about the role of religious schemata in the mental health of their congregations and community.
7) Advocate for the integration of mental health services in religious establishments which could include mental health screening, brief evidence-based guided self-help or sign posting to reputable clinics
8) In some progressive Middle-Eastern Gulf countries, such as the one where the current research was conducted, collaboration with policymakers could help achieve the formulation of policies that promote more appropriate teaching methods and syllabus content for young children learning about their religion.
9) Policymakers could also be encouraged to fund research on the intersection between religiosity and mental health and how religiosity could be harnessed to promote better psychological wellbeing among the more religious segments of society.

6.6 Limitations of Current Research

I acknowledge the ambitious nature of the recommendation proposed above, particularly given they derive from a limited scope of research conducted within a specific setting. Although these constraints do not entirely invalidate the research findings nor make redundant the recommendation above they should be considered within the context of the current thesis. Also, study specific limitations were discussed at the end of each chapter so the points presented below represent an overall summary of these shortcomings.

In general, the research limitations include the fact that due to sample sizes and characteristics, the single location in which the studies were conducted, the finding may not generalise to Muslim populations with differing religious and cultural experiences. Moreover, the self- reported measures used to assess maladaptive religious schemata were only validated within the present sample; therefore, their applicability may be limited in relation to a diverse Muslim population. Additionally, this research is underpinned by a number of assumptions that require further testing before they could be fully adopted. Chief among these is the presumption that religious teachings and cultural influences on these are separate and distinguishable. The other important issue is that of bidirectionality: here the question remains as to whether maladaptive beliefs act as vulnerability

factors for depression and anxiety, or whether these common mental health conditions predispose individuals to report maladaptive beliefs.

6.7 Recommendations for Future Research

Likewise, specific recommendations were made at the end of each chapter, however in broad terms, and to directly address the limitations identified above, future research should endeavour to test the findings of this research with a wider and broader spectrum of Muslims. Also, longitudinal studies are of the essence if the issue of bidirectionality is to be overcome. Additionally, the ReSQue would benefit from validation using other Muslim samples if it is to be used in the assessment and therapy session with a stronger degree of confidence.

Finally, future research should examine the effectiveness of the proposed therapeutic interventions in clinical trials. Cognitive restructuring and imagery dialogue were suggested above solely on theoretical grounds. The safety and effectiveness of these techniques will first need to be established before they can be recommended for routine clinical practice.

6.8 Final Comment

While this has been an extremely challenging research project in terms of navigating the demands of a rigorous scientific investigation while allowing for enough flexibility to accommodate for cultural expectations, it has also been hugely fulfilling and highly educational. The ultimate hope is that it has made even a modest contribution towards our understanding of why certain Muslim populations may display increased susceptibility to mental health problems despite the ample evidence for the positive role of religion. Initial insights drawn from this research suggest the answer may lie not in religion *per se* but certain interpretations and approaches to religious teachings.

Finally, it is intended that this research signifies an incremental addition to the developing body of work focussed on indigenous Muslims societies. This area of research is much needed as it contributes towards deepening our understanding of both Muslim psychology and religion, thereby benefitting those individuals for whom religion is an essential part of life; yet who continue to endure psychological hardship. It was indeed these individuals, with whom I had the honour of working, and to whom I extend my deepest gratitude for inspiring me to carry out this research.

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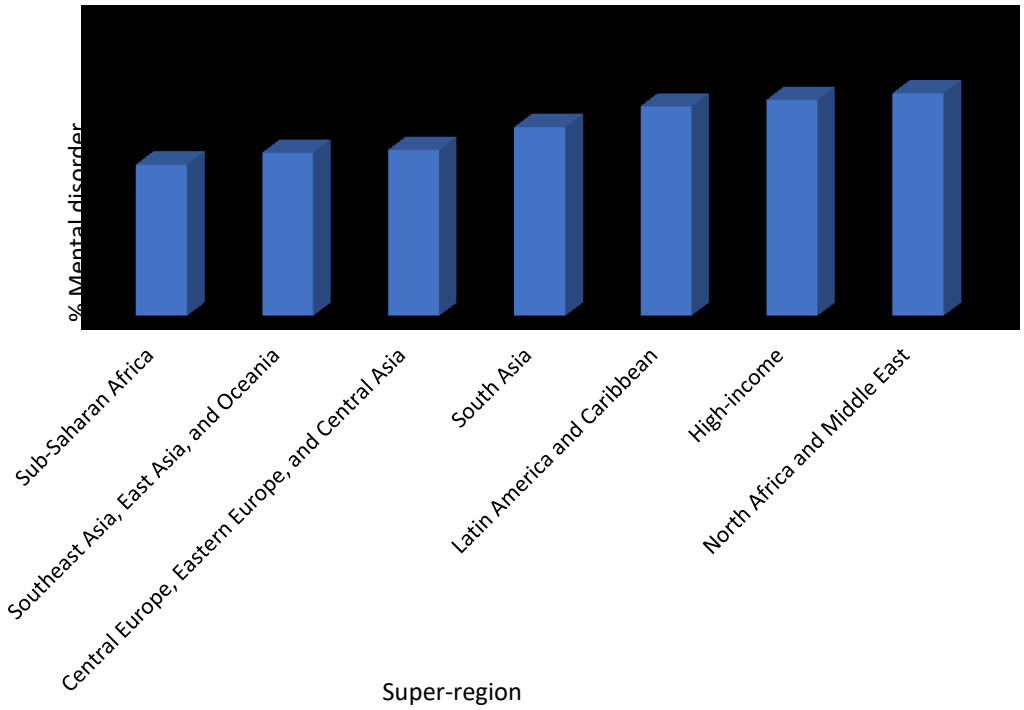
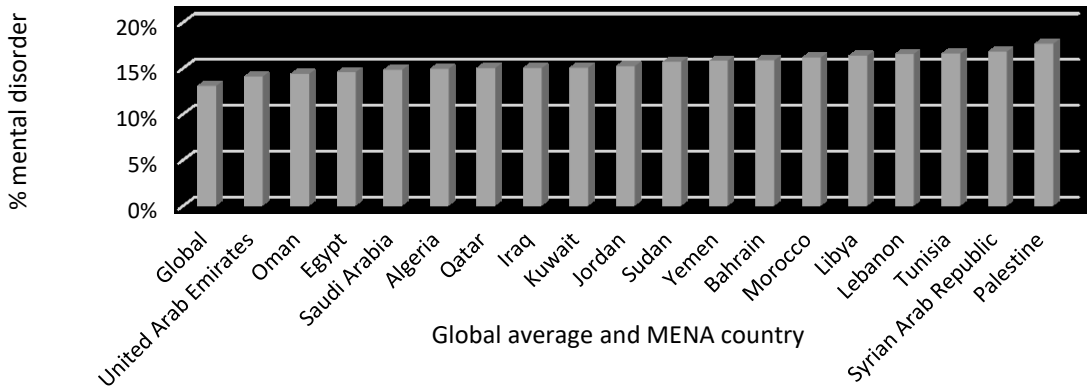
***Appendix 1*:** Internationally sourced prevalence data

Percentage of total prevalent cases of mental health disorders in each of the seven super-regions in GBD study



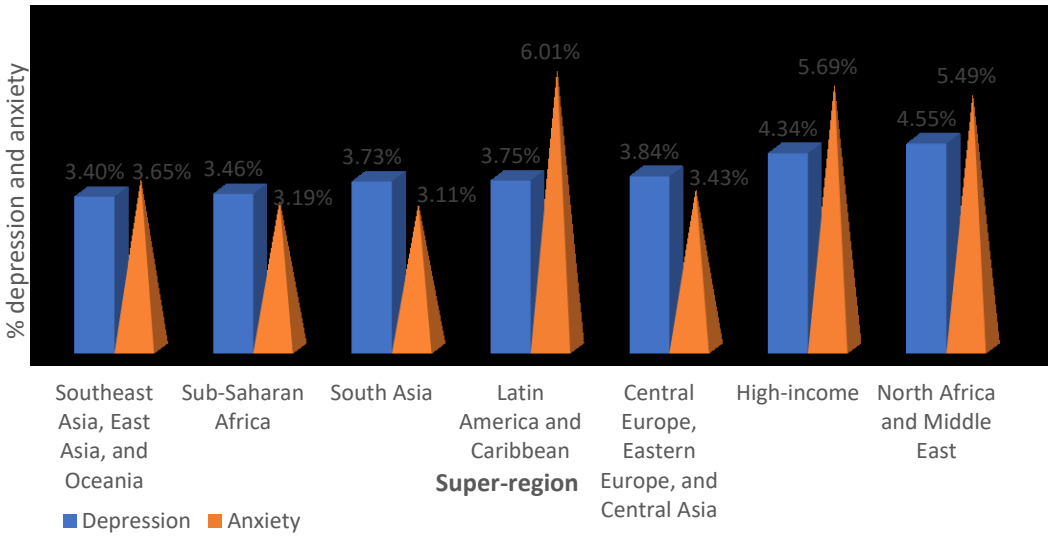
Note: Adapted from Global Burden of Disease Collaborative Network, 2020. Global Burden of Disease Study, 2019 (GBD 2019) Results. Seattle. USA. Institute for Health Metrics and Evaluation (IHME). https://vizhub.healthdata.org/gbd-results/

Percentage of total prevalent cases of mental health disorders in each MENA country and Global average



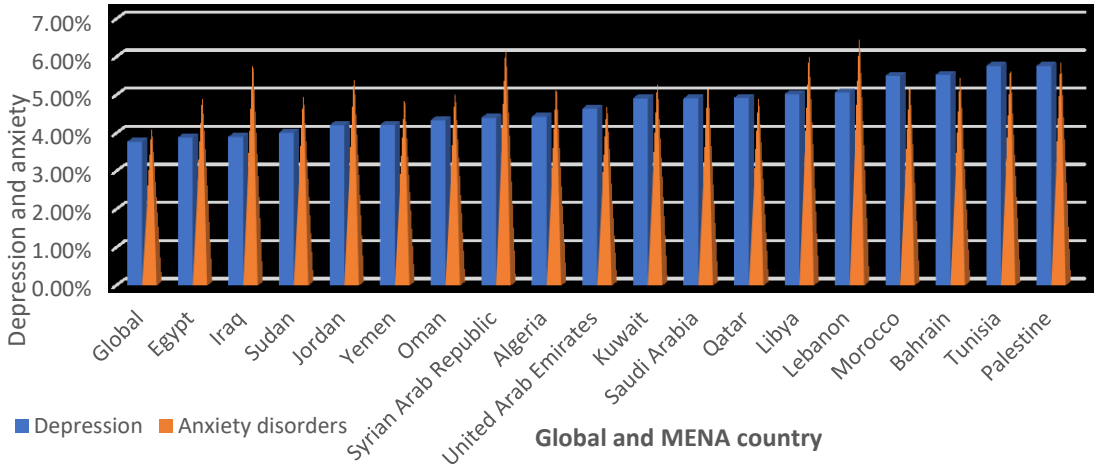
Note: Adapted from {Global Burden of Disease Collaborative Network}. 2020. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle. USA. {Institute for Health Metrics and Evaluation (IHME)}. https://vizhub.healthdata.org/gbd-results/

Percentage of total prevalent cases of depressive and anxiety disorders in each of the seven super-regions



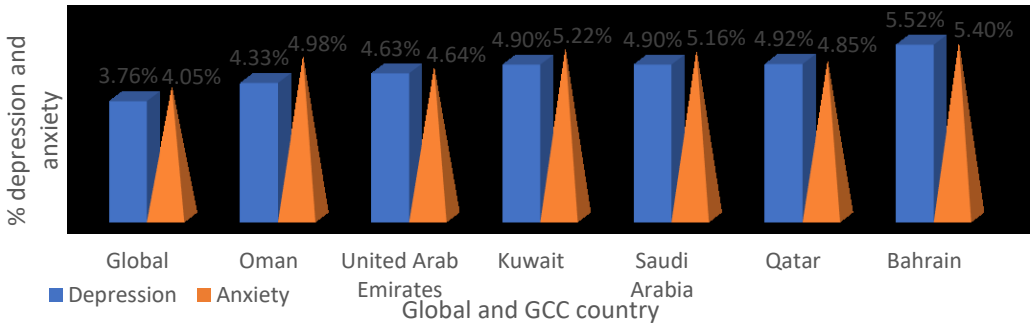
Note: Adapted from {Global Burden of Disease Collaborative Network}. 2020. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle. USA. {Institute for Health Metrics and Evaluation (IHME)}. https://vizhub.healthdata.org/gbd-results/.

Percentage of total prevalent cases of depressive disorders globally and in each MENA country



Note: Adapted from {Global Burden of Disease Collaborative Network}. 2020. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle. USA. {Institute for Health Metrics and Evaluation (IHME)}. https://vizhub.healthdata.org/gbd-results-compare

Percentage of total prevalent cases of depressive and anxiety disorders in GCC countries and global average



Note: Adapted from Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Reference Life Table. Seattle, United States of America: Institute for Health Metrics and Evaluation (IHME), 2021.

Predicted Prevalence of major depressive disorder and anxiety disorders, by super-region, 2020

	Major depressive disorder, per 100,000 population				Anxiety disorders, per 100,000 population			
	Baseline (95% UI)	Additional (95%UI)	Final (95% UI)	% change (95%UI)	Baseline (95%UI)	Additional (95%UI)	Final (95%UI)	% change (95%UI)
Global	2470·5 (2143·5-2870·7)	682.4 (574·1-807.2)	3152·9 (2722·5-3654.5)	27.6 (25·1-30·3)	3824·9 (3283·3-4468.1)	977-5 (824-8-1161.6)	4802.4 (4108.2-5588.6)	25.6 (23·2-28.0)
Central Europe, eastern Europe, and central Asia	2519.7 (2185.0-2911·5)	741.6 (579.1-941.3)	3261.3 (2798.6-3804.8)	29.4 (23·9-35.8)	3274·3 (2801.2-3821.9)	981-0 (774.1-1214·4)	4255·3 (3593.1-4970.8)	30.0 (24.9-35·0)
High- income	3103.3 (2735.6-3526.4)	840·1 (671-7-1030-4)	3943·3 (3466.9-4516.1)	27·1 (22.6-31·5)	5356.8 (4609·1-6233·3)	1349·0 (1044·1-1678.8)	6705.7 (5773.4-7829.4)	25·2 (20.3-30·7)
Latin America and Caribbean	2626.8 (2291.4-3034.4)	914.2 (737-4-1127·5	3541.0 (3063.3-4097.7)	34-8 (29·5-40.7)	5705.9 (4865.4-6732·9	1804-1 (1425.8-2225·1)	7510.0 (6397.9-8786.6)	31.7 (25.8-37·7)
North Africa and Middle East	**3321-4 (2752·3-4013.2)**	**1235·2 (896-1-1642·5)**	**4556.6 (3729·1-5578.3)**	**37·2 (29·5-46.0**	**5148·9 4210.4-6289.4)**	**1664.8 (1178.0-2251.6)**	**6813.6 5557·9-8391.8)**	**32.4 (24·9-41·1)**
South Asia	2664-2 2313·9-3099·5)	962.6 761-6-1187-1	3626.8 (3122.5-4232.7)	36.1 (29.7-42.8	3019.7 (2590.4-3531.6)	1058.3 (813.0-1318.7)	4077.9 (3459·3-4786.7)	35·1 (28.2-42.0)
Southeast Asia, east Asia, and Oceania	1707-8 (1492.4-1958.7)	195·8 (121-8-281-4)	1903.6 (1656.1-2194.3)	11·5 (7.2-16.0)	3367-2 (2903.3-3891·5)	466.0 (307.2-632·0)	3833·2 (3281.8-4478.2)	13.8 (9·3-18.3)
Sub-Saharan Africa	2429.0 (2048.0-2910.2)	559.0 (423-3-722-8)	2988.0 (2513.5-3583·4)	23.0 (18.3-27·9	3001-9 (2465.1-3671.3)	644.0 (479.0-829·9)	3645·9 (2985.7-4475·5	21.5 (17.1-25.7)

UI=uncertainty interval.

Note: reprinted from Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic by Santomauro et al., 2021, The Lancet, 398 (10312), p. 1705.

Appendix 2 – Participant Information Sheet (phase 1)

Project Title: Do 'transpersonal schemata' exist? and if so, what do they look like?

Academic Supervisor:	Email:	Phone:
Dr. Craig Steel (University of Reading)	c.steel@reading.ac.uk	0118 378 7550

Clinical Supervisor:
Dr. Helen Kennerley N/A
(Oxford Cognitive Therapy Centre and University of Oxford)

UAEU Supervisor:
Dr. Fadwa al- Mughairbi

Experimenter:
Taregh Shaban

Dear Sir/Madam,

I would like to invite you to take part in a new research study that aims to improve our understanding of working therapeutically with Muslim populations. But before you decide to take part in the study it might be helpful for you to understand why the research is being carried out and what it would involve for you. Please take time to read the information below carefully and feel free to discuss the study with your family and friends if you wish to do so. Please ask me if there is anything that is not clear to you or if you would like any more information.

What is the purpose of the study?

Many people in this part of the world (Middle-East) report that their faith and religious beliefs are important to them - both in terms of how they view themselves, how they relate to others and how they see the world around them. However, these beliefs and the impact they have on the individual's psychological wellbeing are not well understood.

This study will look at what, and how, beliefs in God, and other spiritual phenomena, relate to our psychological well-being. The study will use the 'Cognitive Behavioural Model' (CBM) as the main model for assessing and understanding the topic under investigation.

What will happen now?

If you agree to take part in the study, you will be asked to come in for an hour, to an hour and a half-long interview, to talk about your thoughts, feelings and behaviours; and how these impact on, and are influenced by, your belief in God and other spirituals convictions. The interview will be conducted by a PhD researcher and a UK qualified and accredited clinician. You will also be asked to fill-in some demographic information (your name, age, gender etc.). The interview will be recorded and transcribed to make sure that: a) What you say is not forgotten or misunderstood, and b) I'm following the correct protocol when interviewing you.

What will happen to my data

All your data, including recordings and transcripts of the interview, will be kept completely confidential and securely stored - with only an anonymous number identifying it. Information linking that number to your name will be stored securely and separately from the data you provide me. All information collected for the project will be destroyed after a period of 5 years from the completion of the project.

Are there any advantages to taking part in this study?

Although there's no direct advantage to taking part in this study, the data collected and learning gained from this study will hopefully contribute to helping therapists address and understand an area of some of their patients' lives that may not always receive sufficient attention; and thus, hopefully, give both therapists and patients a more meaningful therapeutic experience and outcome.

Are there any disadvantages to taking part in this study?

There's a possibility that some of the questions may lead to some discomfort. However, given the fact that you will be interviewed by a qualified clinician, your wellbeing will be at the forefront of his mind throughout the interview.

If as a result of the interview certain issued come up for you that you believe would benefit from being explored further with a qualified professional, the contact details for such an expert will be made available to you.

Do I have to take part?

You do not have to take part in this study, and even after agreeing to take part, you have the right to change your mind and withdraw from the study at any point.

Who is organising and funding the research?

The research is part of Mr. Shaban's PhD thesis and is funded entirely by himself. He is also responsible for organising the study. However, his work is supervised academically by a senior and well-respected member of staff from the University of Reading; and clinically by another senior and well-respected clinician from the Oxford Cognitive Therapy Centre. Mr. Shaban is also supervised by an experienced academic and researcher from the United Arab Emirates University to make sure local protocol and ethical practice is observed at all times.

Who has reviewed the study?

This study has been reviewed by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct and given permission to proceed by the United Arab Emirates University.

Thank you for your time.

Taregh Shaban

Appendix 3 – Participant Consent Form (phase 1)

Project Title: Do 'transpersonal schemata' exist? and if so, what do they look like?

Academic Supervisor:	Email:	Phone:
Dr Craig Steel	c.steel@reading.ac.uk	0118 378 7550

Clinical Supervisor:
Dr. Helen Kennerley N/A
(Oxford Cognitive Therapy Centre and University of Oxford)

UAEU Supervisor:
Dr. Fadwa al- Mughairbi

Experimenter:
Taregh Shaban N/A

1. I understand that my participation in this study is voluntary and that I may withdraw at any time without giving any reason.

2. I have read the information sheet about this study and the procedure of the study has been verbally explained to me.

3. I have received a copy of the information sheet and the consent form.

4. I have been given the opportunity to ask any questions that I may have about the study and these have been answered to my satisfaction.

5. I understand that personal information will not be disclosed, and all data collected will be kept strictly confidential – with only anonymity numbers being used to identify the data.

6. I agreed that consent forms will be kept for up to 5 years, after the end of the study

7. I agree for my interview session to be recorded and transcribed – with this recording and transcription being kept strictly confidential and anonymized.

Participant's signature : ……

Name (in capitals): ……

Date: ……

NAMES OF STUDENT RESEARCHER WHO WAS PRESENT WHEN COLLECTING DATA FROM THIS PARTICIPANT:

Name (print) …… Signature: ……..…

Appendix 4– Contact Details for Support Services

Project Title: Investigating the Relationship Between Transpersonal Schemata and Mental Health Problems

Supervisor: Email:

Prof. Craig Steel c.steel@reading.ac.uk

Researcher:

Taregh Shaban

Contact details for mental health and well-being services:

Thrive Wellbeing Centre

Location

Office 301, Saba Tower 1

Cluster E, JLT

Dubai, UAE

Email & Phone

Vivamus Dubai

Location

Suite 203,

Building 49,

Dubai Healthcare City

Dubai

Email and Phone

Appendix 5: Welcome Statements (prior to interview for Qualitative studies)

Hello, welcome and thank you very much for agreeing to take part in this study:

Have you read the information sheet? …… any questions?

Introductions:

My name is Taregh Shaban. I am a lecturer at the United Arab Emirates University, a PhD/research student at the University of Reading, and fully Accredited (by the BABCP in the UK) as a Cognitive Behavioural psychotherapist. However, my role here today is primarily one of a researcher.

Can I just double-check your name?

Is……. the name you would like me to use to address you, or do you prefer to be called by another name?

The purpose of the meeting, and general outline

The purpose of today's meeting is for me to gather information for the study that you have agreed to take part in, and about which you were given the information sheet and consent form.

During this interview, I'll be asking you about your family history and early upbringing. I'll also be asking about your thoughts, beliefs, and behaviours - both in terms of how they relate to your feelings and in terms of how they relate to your beliefs about God and other spiritual phenomena.

Timescale for the meeting

The interview will take about an hour… Do you have enough time for this?

Reassurance statement

Now, it's important for me at this point to reiterate that if at any stage during our interview you feel you want to terminate the discussion or take time out, you are absolutely welcome to do so. Also, if, following the interview, you feel you need further support from a professional to help you manage any unresolved issues that may have come up during our conversation, then please do let me know and I will refer you to colleagues who are qualified and specialised in helping people with such issues.

Do you have any questions for me at this point?

Appendix 6 - Demographic Information sheet

AGE:

What is your age?

18-24 years old

25-34 years old

35-44 years old

45-54 years old

55-64 years old

65-74 years old

75 years or older

Which month and year were you born in?

(MM/YYYY) _____/_____

GENDER

What is your Gender?

Male

Female

RACE/ETHNICITY

How do you describe yourself?

Emirati

GCC……. Which country? ……..

Other Arab – which country? ……

European – which country?.....

African-American, Black

White – American

Indian

Pakistani

Filipino

African – which country?.....

Middle Eastern

More than one race

Unknown or not reported

Decline to answer

Place of birth: ……

If you are an Emirati citizen, which emirate are you from?

Abu Dhabi

Ajman

Dubai

Fujairah

Ras al-Khaimah

Sharjah

Umm al-Quwain.

FAMILY

Do you have any siblings?

Yes

No

If YES, how many?

1

2

3

4

5

6

7

8+

What is your birth order? (i.e., first child, second child, etc.)

First

Second

Third

Fourth

Fifth

Sixth

Seventh

Eighth +

What is the marital status of your parents?

Married

Separated

Divorced

Never married

Other _____

What was the main language spoken in your childhood home?

Arabic

English

Urdu

Filipino

Spanish

French

Other …….

Do you consider yourself as having good family support?

Yes

No

Have you always had good family support?

Yes

No

Parents' socioeconomic status:

In terms of education and income, would you say your parents are:

Upper class

Upper-middle-class

Middle class

Lower-middle class

Working-class

MARITAL STATUS

Are you.....?

Married

Divorced (peaceful …… judicial …….)

Widowed

Separated

Never been married

Decline to answer

If any, please indicate how many biological and adopted children you have:

Biological Children _____

Adopted Children _____

EDUCATION

What is the highest degree or level of education you've achieved?

Never attended school or only attended kindergarten

Grades 1 through to 8(Elementary)

Grades 9 through 11 to (Some high school)

Grade 12 or GED (High school graduate)

College 1 year to 3 years (Some college of technical school

College 4 years (College graduate)

Trade/technical/vocational training

Associate degree

Bachelor's degree

Master's degree

Professional degree

Doctorate degree

If a University graduate, what was your major at university?

……..

EMPLOYMENT

Are you currently:

Employed for a salary

Self-employed

Out of work for more than 1 year

Out of work for less than 1 year

Out of work but not currently looking for work

A homemaker

A student

Retired

Unable to work

Military

Other…….

If working, what is your monthly salary in AED?

0 - 4,999

5,000 - 7,499

7,500 - 9,999

10,000 - 12,499

12,500 - 14,999

15,000 - 19,999

20,000 - 24,999

25,000 - 29,999

30,000 - 34,999

35,000 - 39,999

40,000 - 49,999

50,000 - 59,999

60,000 - 74,999

75,000 - 99,999

100,000 - 149,999

150,000 or More

Decline to answer

Which of the following best describes your current living situation? (Check all that apply)

I live alone.

I live with other students.

I live with roommates who are not students.

I live with parents(s), relative(s), or guardian(s).

I live with a husband/wife/significant other

I live with my child/children.

RELIGIOUS (ISLAMIC) AFFILIATION

Do you consider yourself to be a practicing Muslim?

Yes

No

Decline to answer

If YES, which madhab do you follow?

Maliki

Hanafi

Hanbali

Shafi'

Other……

Which Aqeeda school do you subscribe to?

Ash'ari

Maturidi

Salafi

Other……

Don't know

Do you follow a Sufi Tariqa? YES……. NO……

Is YES, which one:

…….

Would you say that your family is a religious family?

Yes

No

HEALTH

Do you have any physical health problems?

Yes …….

No

Do have any history of mental health problems?

Yes

No

If YES, do you know what your diagnosis was?

Depression

Anxiety

Panic disorder

Specific phobia …….

Social Phobia

Obsessive Compulsive Disorder

Health Anxiety

PTSD

Personality disorder

Bipolar disorder

Schizophrenia

Other……..

Do you have any current mental health problems?

Yes

No

If YES, do you know what your diagnosis is?

Depression

Anxiety

Panic disorder

Specific phobia …….

Social Phobia

Obsessive Compulsive Disorder

Health Anxiety

PTSD

Personality disorder

Bipolar disorder

Schizophrenia

Other…….

Decline to answer

Are you addicted to, or in recovery from, any of the following?

Drugs (e.g. heroin, cocaine, amphetamine etc.)

Alcohol

Tobacco

Morphine

Tramadol

Others …….

Decline to answer

Thank you very much for answering the questions presented above

Appendix 7: Interview Schedule Qualitative studies

PART 1:

Personal History

• Can you tell me a little bit about your early upbringing (*0-5 years old*)?
(*family situation, atmosphere at home, relationship with parents (discipline and affection?*), *relationship with siblings and significant others, conflicts at home, emotional difficulties etc.*)

• What about early school years (5-12)?
(*relationship with other children, relationship with teacher, bullying, truancy, learning difficulties etc.*)

• Later school life (12-18)?
(*relationship with fellow students and teachers, transition to physical maturity, sexual and emotional experiences, bullying etc.*)

Downward Arrowing *(to beliefs about self, others, relationships, the world and the future)*

Lead-in (using situational analysis)

• Can you think of a preferably typical situation that makes you feel or invokes strong emotion in you (*joy, sadness, anger, disgust etc.*)?

• Where does this usually happen?

• What would you be doing typically and who would you be with?

• Are you able to identify what would trigger that feeling?

• Can you tell me what feeling/ emotions you would experience then?

• Out of all the emotions you experience are you able to identify which one seems the strongest?

• Is it ok to ask you to go back to it in your mind (if you're not there already)?

• Can you tell me what goes through your mind (*thoughts, images, memories, worries etc.*) as you experiencing that emotion?

Thank you for sharing that with me - let me just see if I've grasped the main thoughts, feelings and behaviours that you experience during such a situation?

Downward arrowing to beliefs about self

- Let's assume that that belief is true (and I'm not for one minute suggesting that it is), what does that say about you as a person? or,

- In your mind, what does that mean about you? etc.

Others

Downward arrow to beliefs about others

- Assuming that thought to be accurate what does that say about other people?

- And what does that mean about others?

[Empathy statements, reflections and summaries]

Relationships

Downward arrowing to beliefs about relationships (perhaps link this to beliefs about others)

- Assuming that to be the case what implications does that have on how you relate to others?

- If that is accurate how do you believe, or in fact how do you, approach relationships to others?

[Empathy statements, reflections and summaries]

The world

Downward arrowing to beliefs about the world

- If we take that belief to be true what does that say about the world and how things are in general?

- If that's the case what does it mean about the world and what it's like?

The Future

Downward arrowing to beliefs about the future

- If that's the case what does that say about the future?

- What do you believe the future holds for you?

[Empathy statements, reflections and summaries]

PART 2:

Religious History:

- Did you have a religious or spiritual upbringing?
- Was your family religious?
- How was religion taught and practiced in your family?
- How important was religion to you and your family?
- What beliefs about God did you have as a child?
- What beliefs about religion did you have as a child?
- What beliefs about right and wrong, punishment and reward, did you have as a child?
- What beliefs about heaven and hell did you have as a child?

Downward arrowing (to beliefs about God)

- Are beliefs about God and other religious/spiritual phenomena important to you now?
- How do you believe God sees the world?
- How do you believe God sees people in general?
- How do you believe God sees the way you behaved in the particular situation you mentioned earlier for example?
- How do you believe God sees you in general?
- Assuming God sees you in this way, what does that mean about you?
- How does it make you feel when you think this?
- How do you believe God sees others?

[Empathy statements, reflections and summaries]

- Are you conscious of, or worry about, how God sees you?

- Do you think God approves of you? If yes, why yes? (*what is it about you that makes him approve of you?*) and if not, why not? (*What is it about you that he doesn't approve off*?)

- How important is it for you to be approved of by God?

[Empathy statements, reflections and summaries as appropriate]

- Do you think there are any aspects of you that God approves of?

- What qualities (Asma') of God would you say you are more aware off, or hold in mind more?

- How do you believe these beliefs affect the way you conduct/ live your life? *[Assumptions and rules for living]*

- How do you think these beliefs affect the way you see yourself?

[This may be one of the hardest questions to answer but can I ask…]

- How do you think you live in the Mind of God?

[Thank you very much for answering my questions and sharing your thoughts and beliefs with me]

APPENDIX 8

TRANSCRIBER AND RESEARCH ASSISTANT CONFIDENTIALITY AGREEMENT

Do 'Transpersonal Schemata" exist? And if so, what do they look like?

IRB log numbers: ERS_2018_56_99 (United Arab Emirates University); 2017-145-CS (University of Reading)

I, ……., agree to transcribe data for this study. I agree that I will:

1. Keep all research information shared with me confidential by not discussing or sharing the information in any form or format (e.g., disks, tapes, transcripts) with anyone other than **Mr. Taregh Shaban**, the researcher/s on this study;
2. Keep all research information in any form or format (e.g., disks, tapes, transcripts) secure while it is in my possession. This includes:
    - using closed headphones when transcribing audio-taped interviews;
    - keeping all transcript documents and digitized interviews in computer password-protected files;
    - closing any transcription programs and documents when temporarily away from the computer;
    - keeping any printed transcripts in a secure location such as a locked file cabinet; and
    - permanently deleting any e-mail communication containing the data;
3. Give all research information in any form or format (e.g., disks, tapes, transcripts) to the primary investigator when I have completed the research tasks;
4. Erase or destroy all research information in any form or format that is not returnable to the primary investigator (e.g., information stored on my computer hard drive) upon completion of the research tasks.

_____ _____

Signature of transcriber Date

_____ _____

Signature of principal investigator Date

Appendix 9 – Study information sheet (phase 2)

Project Title: Investigating the Relationship Between Transpersonal Schemata and Mental Health Problems

Supervisor:	Email:	Phone:
Prof. Craig Steel	c.steel@reading.ac.uk	

Experimenter:

Taregh Shaban

Dear Sir/Madam,

I would like to invite you to take part in a new research study that aims to improve our understanding of working therapeutically with Muslim populations. But before you decide to take part in the study it might be helpful for you to understand why the research is being done and what it would involve for you. Please take time to read the information below carefully and feel free to discuss the study with your family and friends if you wish to do so. Please ask me if there is anything that is not clear to you or if you would like any more information. The research is conducted by me - a Ph.D. researcher and a UK qualified clinician.

What is the purpose of the study?

Many people in this part of the world (Middle-East) report that their faith and religious beliefs are important to them - both in terms of how they view themselves, how they relate to others and how they see the world around them. However, these beliefs and the impact they have on the individual's psychological wellbeing are not well understood.

This study will look at what, and how, beliefs in God, and other spiritual phenomena, relate to our psychological well-being. The study will use the 'Cognitive Behavioural Model' (CBM) as the main model for assessing and understanding the topic under investigation.

What will happen now?

If you agree to take part in the study, you will be given an electronic link to a survey website called Qualtrics. There you will be asked to confirm your consent to take part in this study. Then you will be asked some basic information about your age (you must be over 18), gender, socio-economic background, etc. Once this demographic information is completed you will be transferred to a page where you will be asked to complete a questionnaire about your experiences with religious belief.

What will happen to my data

All your data will be kept completely confidential and securely stored - with only an anonymous number identifying you. Information linking that number to your name will be stored securely and separately from the data you provide me. All information collected for the project will be destroyed after a period of 5 years from the completion of the project.

Are there any advantages to taking part in this study?

Although there's no direct advantage to taking part in this study, the data collected, and learning gained from this study, will hopefully contribute to helping therapists address and understand an area of some of their patients' lives that may not always receive sufficient attention; and thus, hopefully, give both therapists and patients a more meaningful therapeutic experience and outcome.

Are there any disadvantages to taking part in this study?

There's a possibility that some of the questions may lead to some discomfort. However, given the fact that you will be interviewed by a qualified clinician, your wellbeing will be at the forefront of his mind throughout the interview.

If, as a result of the interview, certain issues come up for you that you believe would benefit from being explored further with a qualified professional, the contact details for such an expert will be made available to you.

Do I have to take part?

You do not have to take part in this study, and even after agreeing to take part, you have the right to change your mind and withdraw from the study at any point.

Who is organising and funding the research?

The research is part of Mr. Shaban's Ph.D. thesis and is funded entirely by himself. He is also responsible for organising the study. However, his work is supervised academically by a senior and well-respected member of staff from the University of Reading; and clinically by another senior and well-respected clinician from the Oxford Cognitive Therapy Centre. Mr. Shaban is also supervised by an experienced academic researcher from the United Arab Emirates University to make sure local protocol and ethical practice are observed at all times.

Who has reviewed the study?

This study has been reviewed by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct and given permission to proceed by the United Arab Emirates University.

Thank you for your time.

Taregh Shaban, University of Reading

Appendix 10 GAD-7 and PHQ-9

GAD -7

Over the <u>last 2 weeks</u>, how often have you been bothered by the following problems? *(Use "✔" to indicate your answer"*	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

PHQ-9

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer"*	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things.....	0	1	2	3
2. Feeling down, depressed, or hopeless.....	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much.....	0	1	2	3
4. Feeling tired or having little energy.....	0	1	2	3
5. Poor appetite or overeating.....	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down.....	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television.....	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving .around a lot more than usual.....	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way.....	0	1	2	3

Appendix 11: ReSQue Stage 1 (initial draft)

Religious Schema Questionnaire

(ReSQue)

INSTRUCTIONS:

Listed below are statements that people might use to describe their personal experiences with religious and spiritual beliefs. Please read each statement and decide how well it describes you.

Please base your answers on how you **feel** rather than what you **think** the answer should be.

Please choose the **highest rating from 1 to 6** that describes you and write the number on the line before each statement.

PLEASE NOTE THAT THIS QUESTIONNAIRE ASKS ABOUT YOUR PERSONAL (CURRENT AND CHILDHOOD) EXPERIENCE WITH RELIGIOUS AND SPIRITUAL BELIEFS AND IS NO WAY QUESTIONING RELIGION ITSELF.

Each question is divided into two parts: one asks about your childhood experiences and one about your current/ adult experience.

RATING SCALE:

1 = Completely untrue of me

2 = Mostly untrue of me

3 = Slightly more untrue than true

4 = Slightly more true than untrue

5 = Mostly true of me

6 = Completely true of me

EXAMPLE:

A ___4___ I fear God will punish me for delaying my prayer past it's allotted time.

*F (g, e)

1. _____Growing up, **I felt scared whenever I thought of God.**
   A_____ As an adult, **I feel scared whenever I think of God.**

2. _____Growing up, **I was often told that God will punish me.**
   A_____As an adult, **I believe God will punish me.**

3. _____If I'm honest, growing up, **the fear of God, more than the love of God, directed my behaviour.**
   A_____As an adult, **the fear of God, more than the love of God, directs my behaviour.**

4. _____ Growing up, **I was reminded (by others) more about God's punishment than His mercy.**
   A_____ As an adult, **I'm reminded more (by others) about God's punishment than His mercy.**

5. _____Growing up, **I performed religious duties more to avoid the punishment of God than because of the pleasure I experienced in them.**
   A_____As an adult, **I perform religious duties more to avoid the punishment of God than because of the pleasure I experience in them.**

6. _____Growing up, **I was more aware of hell than heaven.**
   A_____As an adult, **I am more aware of hell than heaven.**

7. _____Growing up, **I believed I would receive a severe punishment for any sins I committed.**
   A_____As an adult, **I believe I would receive a severe punishment for any sins I commit.**

8. _____Growing up, **I felt very afraid (of God) when I had romantic feelings towards someone.**
   A_____As an adult, **I feel very afraid (of God) when I have romantic feelings towards someone.**

9. _____Growing up, **I was terrified of God**.
   A_____As an adult, **I'm terrified of God.**

10. _____Growing up, **I was very scared of death because of the punishment in the grave.**
    A_____ As an adult, **I'm very scared of death because of the punishment in the grave.**

11. _____Growing up, **the thought of the horrors of the hereafter was often on my mind.**
    A_____As an adult, **the thought of the horrors of the hereafter is often on my mind.**

12. _____ Growing up, **I was in constant fear of going to hell when I died.**
    A _____ As an adult, **I'm in constant fear of going to hell when I die**.

*F (p, r)

13. _____ Growing up, **I believed if I didn't perform my prayers on time I would go to hell**
    A_____As an adult, **I believe that if I don't perform my prayers on time I will go to hell.**

14. _____Growing up, **I was afraid that if I didn't pray a snake would harm me in the grave.**
    A_____As an adult, **I am afraid that if I don't pray a snake will harm me in the grave.**

15. _____Growing up, **I prayed more out of fear than faith.**
    A_____As an adult, **I pray more out of fear than faith**.

16. _____Growing up, **I would always be reminded about God's punishment if I didn't pray.**
    A_____As an adult, **I am always reminded about God's punishment if I don't pray.**

17. _____Growing up, **I avoided thoughts about praying because of the fear they induced in me.**
    A_____As an adult, **I avoid thoughts about praying because of the fear they induce in me.**

*F (r)

18. _____Growing up, **I believed that I would be punished in hell for having romantic feelings even if I didn't act on them.**
    A_____ As an adult, **I believe that I will be punished in hell for having romantic feelings even if I don't act on them.**

19. _____Growing up, **I believed that if I simply talked to members of the opposite gender I would go to hell.**
    A_____ As an adult, **I believe that if I simply talked to members of the opposite gender I will go to hell.**

20. _____Growing up, **I was afraid of ANYTHING to do with romance because It's haram.**
    A_____As an adult, **I am afraid of ANYTHING to do with romance because It's haram.**

21. _____Growing up, **I was afraid (for religious reasons) of having romantic feelings**
    A_____As an adult, **I am afraid (for religious reasons) of having romantic feelings.**

*F (j, sp)

22. _____ Growing up, **I believed that if I committed sins, I would get possessed by the jin**
    A_____As an adult, **I believe that if I commit sins, I will get possessed by the jin.**

23. _____Growing up, **I was always scared of Jin**

A_____As an adult, **I am scared of Jin**.

*W (g, e)

24. _____Growing I used to **worry when I thought God was watching me**.

    A_____ As an adult, **I worry when I think God is watching me.**

25. _____Growing up, **I felt worried whenever a thought about God came to mind.**

    A_____As an adult, **I worry whenever I think of God.**

26. _____Growing up, **I often felt worried that I had done something wrong (in terms of religion).**

    A_____As an adult, **I often worry that I have done something wrong (in terms of religion).**

27. _____Growing up, **I worried more about going to hell than thought about going to heaven.**

    A_____As an adult, **I worry more about going to hell than think about going to heaven.**

28. _____Growing up, **I worried a lot about what would happen to me in the grave.**

    A_____As an adult, **I worry a lot about what will happen to me in the grave.**

29. _____Growing up, **I worried that when I died, I would go to hell**

    A_____As an adult, **I worry that when I die, I will go to hell.**

30. _____Growing up, **I worried a lot about what will happen to me in the hereafter.**

    A_____ As an adult, **I worry a lot about what will happen to me in the hereafter.**

31. _____Growing up, **I often worried about what would happen to me on the day of judgment.**

    A_____ As an adult, **I worry about what will happen to me on the day of judgment.**

*W (p, r)

32. _____Growing up, **I always worried that if I didn't pray on time, I would go straight to hell.**

    A_____ As an adult, **I always worry that if I don't pray on time, I will go straight to hell.**

*W (r)

33. _____Growing up, **I worried whenever I had any romantic feelings (even if I didn't act on them).**

    A_____As an adult, **I worry whenever I have romantic feelings (even if I don't act on them).**

34. _____Growing up, **I worried that God would punish me for having romantic feelings towards another person.**

A_____As an adult, **I worry that God will punish me for having romantic feelings towards another person**.

*W (j, sp)

35. _____Growing up, **I worried that shaytan (devil) has a lot of influence over me.**

A_____As an adult, **I worry that shaytan (devil) has a lot of influence over me**.

*G (g, e)

36. _____Growing up, **I felt guilty when I thought of what God must think of me.**

A._____As an adult, **I feel guilty when I think of what God must think of me.**

*G (p, r)

37. _____Growing up, **I carried a lot of religious guilt**.

A._____As an adult, **I carry a lot of religious guilt.**

38. _____Growing up, **I felt very guilty when I didn't pray on time**

A._____As an adult, **I feel guilty when I don't pray on time.**

39. _____Growing up, **I felt religious guilt about lots of things I did.**

A._____As an adult, **I feel lots of religious guilt for lots of things I do.**

40. _____Growing up, **I mostly prayed in order to relieve religious guilt.**

i. A._____As an adult, **I mostly prayed in order to relieve religious guilt.**

41. _____Growing up, **I felt guilty for not being a perfect Muslim.**

A_____As an adult, **I feel guilty for not being a perfect Muslim.**

42. _____Growing up, **I avoided thinking about praying because I felt guilty when I thought about it.**

A_____As an adult, **I avoid thinking about praying because I feel guilty when I think about it.**

43. _____Growing up, **I suppressed thoughts about not praying because I felt guilty when I thought of prayer.**

A_____As an adult, **I suppress thoughts about not praying because I feel guilty when I think of prayer.**

44. _____Growing up, **the sense of guilt in relation to religious practice was very strong in me.**

A_____As an adult, **the sense of guilt in relation to religious practice is very strong in me.**

*G (rm)

45. _____Growing up, **I felt very guilty about being attracted to someone else.**

A._____ As an adult, **I am very guilty about being attracted to someone else.**

*Sh (g, e)

46. _____Growing up, **I believed God saw me as disgusting.**

A_____As an adult, **I believe God sees me as disgusting.**

47. _____Growing up, **I felt ashamed of myself in front of God.**

A_____As an adult, I **feel ashamed of myself in front of God**.

*Sh (p, r)

48. _____Growing up, **I felt very ashamed if I didn't pray on time**.

A_____As an adult, **I feel very ashamed if I don't pray on time.**

49. _____Growing up, **I felt ashamed of my behaviour in relation to my religious duties.**

A._____As an adult, **I feel ashamed of my behaviour in relation to my religious duties.**

50. _____Growing up, **I felt ashamed of myself for doing something religiously forbidden even if no one else knew about it.**

A_____As an adult, **I feel ashamed of myself for doing something religiously forbidden, even if no one knows about it.**

*Sh (r)

51. _____Growing up, **I avoided any romantic feelings because it's forbidden in our religion.**

A_____As an adult, **I avoid any romantic feelings because it's forbidden in our religion.**

52. _____Growing up, **I felt a strong sense of shame about anything to do with romantic relationships.**

A_____As an adult, **I feel a strong sense of shame about anything to do with romantic relationships.**

53. _____Growing up, **I felt very ashamed when I had romantic feelings towards someone (even if I didn't act on them).**

A_____As an adult, **I feel very ashamed when I have romantic feelings towards someone (even if I don't act on them).**

54. _____Growing up, **I felt a strong sense of <u>shame</u> if I talked to members of the opposite gender.**

A_____As an adult, **I feel a strong sense of <u>shame</u> if I talk to members of the opposite gender.**

*Sh (j, sp)

55. _____Growing up, **I believed it was shameful to be possessed by the jin.**

A_____As an adult, **I believe it is shameful to be possessed by the jin.**

56. _____Growing up, **I believed people got possessed by the jin because they did something shameful.**

A_____As an adult, **I believe people get possessed by the jin because they do something shameful.**

*S (g, e)

57. _____Growing up, **I felt sad because I believed God would never accept me.**

A_____As an adult, **I feel sad because I believe God will never accept me.**

58. _____Growing up, **I felt devastated when I disobeyed God.**

A_____As an adult, **I feel devastated when I disobey God**.

59. _____Growing up, **I felt sad when I felt disconnected from God.**

A_____As an adult, **I feel sad when I feel disconnected from God.**

*S (p, r)

60. _____Growing up, **I felt empty inside when I didn't perform my prayers on time.**

A_____As an adult, **I feel empty inside when I don't perform my prayers on time.**

61. _____Growing up, **I felt bad about myself when/if I didn't pray on time.**

A_____As an adult, **I feel bad about myself when/if I don't pray on time.**

62. _____Growing up, **I felt disappointed in myself for not being a perfect Muslim.**

A_____As an adult, **I feel disappointed in myself for not being a perfect Muslim.**

63. _____Growing up, **I felt sad when I saw someone doing something irreligious.**

A_____As an adult, **I feel sad when I see someone doing something irreligious.**

*S (rm)

64. _____Growing up, **I felt I'd let myself down by having romantic feelings towards someone.**

A_____As an adult, **I feel have let myself down by having romantic feelings towards someone.**

65. _____Growing up, **I felt I let significant others (parents, friends etc) down by having romantic feelings towards someone**.

A_____As an adult, **I feel I let significant others (parents, friends etc) down by having romantic feelings towards someone.**

*A (g, e)

66. _____Growing up, **I felt angry with myself for having certain beliefs about God (that I shouldn't have).**

A_____As an adult, **I feel angry with myself for having certain beliefs about God (that I shouldn't have).**

67. _____Growing up, **I felt really angry with myself for not obeying God in the way I should.**

A_____As an adult, **I feel angry with myself for not obeying God in the way I should.**

68. _____Growing up, **I felt angry with myself for disobeying God even in the smallest things.**

A_____As an adult, **I feel angry with myself for disobeying God even in the smallest things.**

A (p, r)

69. _____Growing up, **I felt angrier with myself than happy (with myself) in relation to my prayers.**

A_____As an adult, **I feel angrier with myself than happy (with myself) in relation to my prayers.**

70. _____Growing up, I **felt angrier with myself than happy (with myself) in relation to carrying out my religious duties.**

A_____As an adult, **I feel angrier with myself than happy (with myself) in relation to carrying out my religious duties.**

71. _____Growing up, I **felt angry when I saw someone doing something irreligious.**

A_____As an adult, **I feel angry when I see someone doing something irreligious.**

*A (r)

72. _____Growing up, I **felt angry with myself for having romantic feelings towards someone.**

A_____As an adult, **I feel angry with myself for having romantic feelings towards someone.**

73. _____Growing up, I **felt angry with others who have romantic feelings towards other people.**

A_____As an adult, **I feel angry with others who have romantic feelings towards other people.**

*C (Sf)

74. _____Growing up, **there were lots of religious dos and don'ts in my life.**

A_____ As an adult, **there are lots of religious dos and don'ts in my life.**

75. _____Growing up, **I often said I'd prayed when I actually hadn't.**

A_____As an adult, **I often say I prayed when I hadn't**.

76. _____Growing up, **it was very important to me that God approved of me.**

A_____As an adult, **it is very important to me that God approves of me.**

77. _____Growing up, **I believed God was not pleased with me.**

A_____As an adult, **I believe that God is not pleased with me.**

78. _____Growing up, **I believed I was not good enough in the eyes of God.**

A_____As an adult, **I believe I am not good enough in the eyes of God.**

79. _____Growing up, **I believed God would only be pleased with me if I prayed on time.**

A_____As an adult, **I believe God would only be pleased with me if I prayed on time.**

80. _____Growing up, **I believed I was a weak person because I couldn't fulfil my religious duties in the way I was supposed to.**

A_____As an adult, **I believe I'm a weak person because I can't fulfil my religious duties in the way I am supposed to**.

81. _____Growing up, **I believed God saw me as a sinner.**
A_____As an adult, **I believe God sees me as a sinner.**

82. _____Growing up, **I believed God saw me as a bad person.**
A_____As an adult, **I believe God sees me as a bad person**.

83. _____Growing up, **not being a good Muslim negatively affected my self-esteem.**
A_____As an adult **not being a good Muslim negatively affects my self-esteem**.

84. _____Growing up, **I believed God was angry with me**.
A_____As an adult, **I believe God is angry with me.**

85. _____Growing up, **I believed that how good you were depended on whether you prayed and read the Quran or not**.
A_____As an adult, **I believe that how good you are depends on whether you pray and read the Quran or not**.

86. _____Growing up, **I believed I was going to go to hell.**
A_____As an adult, **I believe I am going to go to hell.**

87. _____Growing up, **I believed that if you didn't pray, you were a bad person, period**.
A_____As an adult, **I believe that if you don't pray, you are a bad person**, **period.**

88. _____Growing up, **I believed God saw me as a failure**.
A_____ As an adult, **I believe God sees me as a failure.**

89. _____Growing up, **I believed God was disappointed in me.**
A_____As an adult, **I believe God is disappointed in me.**

90. _____Growing up, **I believed that I was not good enough in the eyes of God.**
A_____As an adult, **I believe I am not good enough in the eyes of God**.

91. _____Growing up, **I believed God was not pleased with me**.
A_____ As an adult, **I believe God is not pleased with me.**

92. _____Growing up, **I believed I was a sinner, and this bothered me**.
A_____As an adult, **I believe I am a sinner, and this bothers me**.

93. _____Growing up, **I believed God's approval depended on what I did and not on who I was as a person.**

A_____As an adult, **I believe God's approval depends on what I do and not on who I am as a person.**

94. _____Growing up, **I believed I was a bad Muslim, and this upset me**.
A_____As an adult, **I believe I am a bad Muslim, and this upsets me**.

**C (Os)*

95. _____Growing up, **I believed God only loved those who follow Islam**.
A_____As an adult, **I believe God only loves those who follow Islam**.

96. ____Growing up, **I believed God is angry with those who don't follow Islam**.
A_____As an adult, **I believe God is angry with those who don't follow Islam**.

97. _____Growing up, **I believed only Muslims would go to heaven**
A_____As an adult, **I believe only Muslims will go to heaven**.

*C (Wd)

98. _____Growing up, **I believed this world was just one big test for everyone.**
A_____As an adult, **I believe this world is just one big test for everyone**.

99. _____Growing up, **I believed the world is a cursed place.**
A_____As an adult, **I believe the world is a cursed place.**

100. _____Growing up, **I believed that the world was not for us Muslims**.
A_____As an adult, **I believe the world is not for us Muslims.**

Appendix 12

Childhood Religious Schema Questionnaire

(C-ReSQue)

INSTRUCTIONS:

Listed below are statements that people might use to describe their personal experiences with religious and spiritual beliefs. Please read each statement and decide how well it describes you.

Please base your answers on how you genuinely **feel** rather than what you **think** the answer should be.

Please choose the **highest rating from 1 to 6** that describes you and write the number on the line before each statement.

PLEASE NOTE THAT THIS QUESTIONNAIRE ASKS ABOUT YOUR PERSONAL (CHILDHOOD) EXPERIENCE WITH RELIGIOUS AND SPIRITUAL BELIEFS, AND IS NO WAY QUESTIONING RELIGION ITSELF.

RATING SCALE:

1 = Completely untrue of me

2 = Mostly untrue of me

3 = Slightly more untrue than true

4 = Slightly more true than untrue

5 = Mostly true of me

6 = Completely true of me

EXAMPLE:

A ___4___ I fear God will punish me for delaying my prayer past it's allotted time.

Theocentric Core beliefs/ unconditional beliefs

1. _____Growing up, **I believed God saw me as a bad person.**

2. _____Growing up, **I believed God was disappointed in me.**

3. _____Growing up, **I believed I was a bad Muslim, and this upset me**.

Theophobia

4. _____If I'm honest, growing up, **the fear of God, more than the love of God, directed my behaviour.**

5. _____ Growing up, **I was reminded (by others) more about God's punishment than His mercy.**

6. _____Growing up, **I was more aware of hell than heaven.**

Eschatological Anxiety

7. _____Growing up, **I worried a lot about what would happen to me in the grave.**

8. _____Growing up, **I worried that when I died, I would go to hell**

9. _____Growing up, **I worried a lot about what will happen to me in the hereafter.**

Apitheothymia

10. _____Growing up, **I felt sad when I felt disconnected from God.**

11. _____Growing up, **I felt empty inside when I didn't perform my prayers** on time**.**

12. _____Growing up, **I felt bad about myself when/if I didn't pray** on time**.**

Forbidden Love

13. _____Growing up, **I worried whenever I had any romantic feelings** (even if I didn't act on them**).**

14. _____'Growing up, I **believed that I would be punished in hell for having romantic feelings** even if I didn't on them.'**.**

15. _____Growing up, **I felt very ashamed when I had romantic feelings towards someone** (even if I didn't act on them).

Theocentric Conditional Beliefs

16. _____Growing up, **I believed that how good you were depended on whether you prayed and read the Quran or not**.
17. _____Growing up, **I believed God only loved those who follow Islam**.

18. _____Growing up, **I believed God is angry with those who don't follow Islam**.

Appendix 13

Adult Religious Schema Questionnaire

(A-ReSQue)

INSTRUCTIONS:

Listed below are statements that people might use to describe their personal experiences with religious and spiritual beliefs. Please read each statement and decide how well it describes you.

Please base your answers on how you genuinely **feel** rather than what you **think** the answer should be.

Please choose the **highest rating from 1 to 6** that describes you and write the number on the line before each statement.

PLEASE NOTE THAT THIS QUESTIONNAIRE ASKS ABOUT YOUR PERSONAL (CURRENT) EXPERIENCE WITH RELIGIOUS AND SPIRITUAL BELIEFS AND IS NO WAY QUESTIONING RELIGION ITSELF.

RATING SCALE:

1 = Completely untrue of me

2 = Mostly untrue of me

3 = Slightly more untrue than true

4 = Slightly more true than untrue

5 = Mostly true of me

6 = Completely true of me

EXAMPLE:

A ___4___ I fear God will punish me for delaying my prayer past it's allotted time.

Theocentric Core beliefs/ unconditional beliefs

1. _____ As an adult, **I believe God sees me as a bad person.**

2. _____ As an adult, **I believe God is disappointed in me.**

3. _____ As an adult, **I believe God sees me as a sinner**.

Theophobia

4. _____ As an adult, **I pray more out of fear than faith**

5. _____ As an adult, **I avoid thoughts about praying because of the fear they induce in me**

6. _____ As an adult, **I perform religious duties more to avoid the punishment of God than because of the pleasure I experience in them**.

Eschatological Anxiety

7. _____ As an adult, **I worry about what will happen to me on the day of judgment**.

8. _____ As an adult, **I worry a lot about what will happen to me in the grave**.

9. _____ As an adult, **I worry a lot about what will happen to me in the hereafter**.

Apitheothymia

10. _____ As an adult, **I feel ashamed of myself for doing something religiously forbidden,** even if no one knows about it**.**

11. _____ As an adult, **I feel guilty when I don't pray** on time.

12. _____ As an adult, **I feel bad about myself when/if I don't pray** on time.

Forbidden Love

13. _____ As an adult, **I worry whenever I have romantic feelings** (even if I don't act on them).

14. _____ As an adult, **I feel angry with myself for having romantic feelings towards someone**.

15. _____ As an adult, **I feel very ashamed when I have romantic feelings towards someone** (even if I don't act on them).

Theocentric Conditional Beliefs

16. _____ As an adult, **I believe that if you don't pray, you are a bad person, period**.

17. _____ As an adult, **I believe God is angry with those who don't follow Islam**

18. _____ As an adult, **I believe that how good you are depends on whether you pray and read the Quran or not**.

Appendix 14

Psychological Measure of Islamic Religiousness (PMIR)

(Abu Raiya et al., 2008)

(Subscales used highlighted)

Islamic Beliefs Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1. *I believe in the existence of Allah*

No (0) Uncertain (1) Yes (2)

2. *I believe in the Day of Judgment*

No (0) Uncertain (1) Yes (2)

3. *I believe in the existence of paradise and hell*

No (0) Uncertain (1) Yes (2)

4. *I believe in the existence of the angels, the Jinn, and Satan*

No (0) Uncertain (1) Yes (2)

5. *I believe in all the prophets that Allah sent and in the sacred texts that were revealed to them*

No (0) Uncertain (1) Yes (2)

Islamic Ethical Principles Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1. *Because of Islam, I strive to be a humble person*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

2. *Because of Islam, I do my best to honor my parents*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

3. *Because of Islam, I try to help my relatives and neighbors*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

4. *Because of Islam, I try to help the needy and the orphans*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

5. *Because of Islam, I strive to be a tolerant person*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

6. *Because of Islam, I refrain from eating pork*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

7. *Because of Islam, I refrain from drinking alcohol*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

8. *Because of Islam, I refrain from having sex before marriage or outside marriage*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

9. *Because of Islam, I do not consider committing suicide*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

10. *Because of Islam, I refrain from gossip*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

Islamic Universality Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1. *I consider every Muslim in the world as my brother or sister*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

2. *I empathize with the suffering of every Muslim in the world*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

3. *One of my major sources of pride is being a Muslim*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

4. *I believe that brotherhood and sisterhood is one the basic tenets of Islam*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

Islamic Duty Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1. *How often do you pray?*

Never (0)

A few times a year (1)

Several times a month (2)

Several times a week (3)

Most of the times the 5 daily prayers (4)

Five times a day or more (5)

2. *How often do you fast?*

Never (0)

Few times in life (1)

Few days of the month of Ramadan each year (2)

Half to all the month of Ramadan each year (3)

The whole month of Ramadan each year (4)

Other religious days or sunnah fasts in addition to Ramadan (5)

3. *How often do you go to the masjid?*

Never (0)

A few times in my life (1)

A few times a year (2)

A few times a month (3)

About once or twice a week (4)

Once a day or more (5)

4. *Except in prayers, how often do you read or listen to the Holy Qura'n?*

Never (0) A few times in my life (1) A few times a year (2)

A few times a month (3) About once or twice a week (4)

Once a day or more (5)

5. *Except in prayers, how often do you engage in d'iker or tasbih?*

Never (0) A few times in my life (1) A few times a year (2)

A few times a month (3) About once or twice a week (4)

Once a day or more (5)

Islamic Obligation Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1*. I fast in Ramadan because I would feel bad if I did not*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

2*. I pray because if I do not, Allah will disapprove of me*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

3*. I read the Holy Qura'n because I would feel guilty if I did not*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

4*. I go to the masjid because one is supposed to go to the masjid*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

5*. I go to the masjid because others would disapprove of me if I did not*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

Islamic Exclusivism Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1*. Islam is Allah's complete, unfailing guide to happiness and salvation, which must be totally followed*

Very strongly disagree (-4) Strongly disagree (-3) Moderately disagree (-2)

Slightly disagree (-1) Slightly agree (1) Moderately agree (2)

Strongly agree (3) Very strongly agree (4)

2*. Of all the people on this earth, Muslims have a special relationship with Allah because they believe the most in His revealed truths and try the hardest to follow His laws.*

Very strongly disagree (-4) Strongly disagree (-3) Moderately disagree (-2)

Slightly disagree (-1) Slightly agree (1) Moderately agree (2)

Strongly agree (3) Very strongly agree (4)

3*. It is more important to be a good person than to believe in Allah and the right religion* (reverse score)

Very strongly disagree (4) Strongly disagree (3) Moderately disagree (2)

Slightly disagree (1) Slightly agree (-1) Moderately agree (-2)

Strongly agree (-3) Very strongly agree (-4)

4. *Islam is the best way to worship Allah, and should never be compromised*

Very strongly disagree (-4) Strongly disagree (-3) Moderately disagree (-2)

Slightly disagree (-1) Slightly agree (1) Moderately agree (2)

Strongly agree (3) Very strongly agree (4)

Islamic Religious Struggle Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1. *I find myself doubting the existence of Allah*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

2. *I find some aspects of Islam to be unfair*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

3. *I find myself doubting the existence of afterlife*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

4. *I think that Islam does not fit the modern time*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

5. *I doubt that the Holy Qura'n is the exact words of Allah*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

6. *I feel that Islam makes people intolerant*

Never (0) Rarely (1) Sometimes (2) Often (3) Very often (4)

Islamic Identification Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1*. I pray because I enjoy it*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

2*. I pray because I find it satisfying*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

3*. I read the Holy Qura'n because I feel that Allah is talking to me when I do that*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

4*. I read the Holy Qura'n because I find it satisfying*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

5*. I fast in Ramadan because when I fast I feel close to Allah*

Not at all true (1) Usually not true (2) Usually true (3) Very true (4)

Not applicable

Islamic Positive Religious Coping Subscale

1*. When I face a problem in life, I look for a stronger connection with Allah*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

2*. When I face a problem in life, I consider that a test from Allah to deepen my belief*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

3*. When I face a problem in life, I seek Allah's love and care*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

4*. When I face a problem in life, I read the Holy Qura'n to find consolation*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

5*. When I face a problem in life, I ask for Allah's forgiveness*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

6*. When I face a problem in life, I remind myself that Allah commanded me to be patient*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

7*. When I face a problem in life, I do what I can and put the rest in Allah's hands*

I do not do this at all (1) I do this a little (2)

I do this a medium amount (3) I do this a lot (4)

Punishing Allah Reappraisal Subscale

Please circle the answer that best indicates your reaction to each the following statements.

1*. When I face a problem in life, I believe that I am being punished by Allah for bad actions I did*

I do not do this at all (1) **I do this a little (2)**

I do this a medium amount (3) **I do this a lot (4)**

2. When I face a problem in life, I wonder what I did for Allah to punish me

I do not do this at all (1) **I do this a little (2)**

I do this a medium amount (3) **I do this a lot (4)**

3*. When I face a problem in life, I feel punished by Allah for my lack of devotion*

I do not do this at all (1) **I do this a little (2)**

I do this a medium amount (3) **I do this a lot (4)**

Islamic Religious Conversion Subscale

Please answer yes or no to the following statement

In my life, I have changed from a non-religious person to a religious person

No (0) Yes (1)

If your answer to the above statement is yes, please circle the answer that best indicates your reaction to each of the following statements.

1*. Becoming more involved in Islam was a turning point in my life*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

2*. Islam has moved from the outside to the very center of my life*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

3*. At one point in my life, I realized that Islam is the solution to all of my problems*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

4*. All at once, I felt that my life has no meaning without Islam*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

5. *All at once, I felt that I am on the wrong path and that I should follow the path of Allah*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

6. *In comparison to the way I used to be, Islam touches every aspect of my life*

Strongly disagree (1) Disagree (2) Neutral (3) Agree (4)

Strongly agree (5)

Global Religiousness

Please circle the answer that best indicates your reaction to each the following statements.

1. *How do you describe your religiousness?*

Very low (1) Low (2) average (3) High (4) Very high (5)

2. *How do you describe your spirituality?*

Very low (1) Low (2) average (3) High (4) Very high (5)

Abu Raiya, H., Pargament, K. I., Mahoney, A., & Stein, C. (2008). A Psychological Measure of Islamic Religiousness: Development and Evidence for Reliability and Validity. *The International Journal for the Psychology of Religion*, *18*(4), 291–315. https://doi.org/10.1080/10508610802229270