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The psychological wellbeing, ways of coping and religious coping among South African Muslims during the 2020 COVID-19 pandemic

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A research report submitted in partial fulfilment of the requirements for the Degree of Master of Arts by Coursework and Research Report in the field of Social and Psychological Research in the Faculty of Humanities, University of the Witwatersrand, Johannesburg, April 2021

Declaration

I declare that this research project is my own unaided work. All information taken from other sources has been rightfully acknowledged. It has not been submitted before for any other degree or examination at this or any other university.

s gani

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23 April 2021

Abstract

The current COVID-19 pandemic brings to the fore the primary psychological concerns around elevated levels of stress and anxiety. Stressors include the fear of falling ill, financial woes due to not being at work, feeling powerless and the fear of potentially infecting others. Lifestyle changes such as limited social interaction and not being at work can result in feelings of isolation which can exacerbate anxiety and depressive symptoms. Coping styles during the lockdown may assist in promoting better wellbeing or decreasing wellbeing and if explored can aid with intervention for individuals. Religious coping in particular is often cited in conditions similar to COVID-19 wherein religious adherents view these circumstances as the will of God. With the noticeable psychological impact of COVID-19 it is necessary to understand the coping strategies employed under these circumstances and the effect on psychological wellbeing and understand the role of religious coping in particular, during times of uncertainty and distress. Therefore, this study sought to explore the relationships between coping and psychological wellbeing, and religious coping and psychological wellbeing in a sample of Muslim participants in South Africa during COVID-19. A total of 410 Muslim participants across South Africa completed a survey measuring coping styles, religious coping styles and psychological wellbeing during the COVID-19 lockdown period in South Africa. The results indicate that Muslims make use of *acceptance* and *religious* coping styles that can be attributed to their religious system of belief and practices. These were also correlated to their psychological wellbeing, suggesting that these coping strategies and religious coping strategies in particular have positive outcomes for wellbeing. Active coping and emotional support predict overall psychological wellbeing in this sample. This indicates that actively trying to cope with stressors associated with COVID-19 and turning to others for emotional support during this time to be useful coping strategies in promoting psychological wellbeing among South African Muslims. Future research can probe into the relationship between coping and different structures of wellness such as subjective wellbeing among South Africans during COVID-19. The result of this study adds to the growing body of literature surrounding COVID-19 in South Africa, and in particular culturally specific minorities which can help inform on therapeutic practices relevant to this new phenomena.

Keywords: coping; emotional support; Islam; problem focused coping; psychological wellbeing; religious coping

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Bismillahi Rahmaanir Raheem - In the name of Allah, the most Kind, the most Merciful.

"*Iqrah*"- the first word revealed to the final messenger Muhammed (may peace be with him), translated as "read".

The very first verse being, "*Iqrah Bismi Rabbikal Lathee Khalaq*" – "Read in the name of your Lord who Created."

Understood as the pursuit of knowledge is akin to faith.

I am thankful to Almighty Allah for opening my path and giving me the strength and ability to complete this report.

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Chapter One: Introduction

The novel coronavirus, SARS-CoV-2 resulting in the COVID-19 pandemic is a highly contagious respiratory tract infection has been declared an international pandemic, affecting more than 200 countries worldwide (WHO, 2020). SARS-CoV-2 is among the family of coronaviruses as seen previously by the Severe Acute Respiratory Syndrome (SARS) and Middle- East Respiratory Syndrome (MERS) which resulted in more than 10 000 infections and 1500 deaths collectively (Lu, Zhao, 2020). Currently, the infection rate of COVID-19 is far more wide-spread and alarming with the number of infected cases reaching over millions of infections and over a hundred thousand deaths worldwide continuing in an upward trend (WHO, 2020).

COVID-19 is a viral pathogen, with human-to-human transmission resulting in pneumonia-like symptoms (Lu, Zhang, 2020). The COVID-19 virus is stated to be infectious even during the asymptomatic period when an individual experiences no symptoms (Rothe, Schunk et, al, 2020). The World Health Organization implemented strategies to limit exposure to the virus, such as wearing a mask, maintaining a 1.5-meter distance, disinfecting surfaces and, practicing frequent handwashing (WHO, 2020) The virus droplets also exist actively on most surfaces (WHO, 2020). These conditions allow for a more progressive and efficient spread of the virus with many unaware of their infected status until tested. Thus, requiring many to perform social distancing, increasing hygienic practices, limiting large gatherings and halting many social activities.

The virus began to take effect in Wuhan, in the Hubei province of the Republic of China in December 2019 reaching dozens of countries in a matter of several weeks (Patel, Jernigan, 2020). The aggressive spread of the virus in a relatively short period has sparked an increased level of fear in the international community, both on a governmental and individual level. With this, many countries employed a “lockdown” strategy to help minimize the spread. The lockdown meant that most citizens were required to stay at home, with increased social distancing and only limited movement to allow their basic needs to be met. This resulted in many businesses and corporations closing for that period, allowing only those that fall as an essential service provider to be open and accessible to the public such as food and healthcare. With the lockdown in place, public and private establishments such as schools, universities, sporting clubs and religious institutions had to be shut down. This strategy was intended to help “flatten the curve” of spread by restricting the contact between individuals, thereby minimizing spread (Gonzalez-Eiras, Niepelt, 2020).

During this period most South Africans were home without work which resulted in many relying on their last paycheck to get them through the lockdown. The government employed strategies such as UIF (Unemployment Insurance Fund) payments to registered workers and business relief packages to help ease financial burdens (Department of Employment & Labour, 2020). Despite this, the fear of infection coupled with the fear of financial strain may leave many feeling overwhelmed, uncertain and, even anxious during this time resulting in possible psychological strain and emotional fatigue.

Coping styles during the lockdown may assist in promoting better wellbeing or decreasing wellbeing and if explored can aid with intervention for individuals. Religious coping in particular is often cited in conditions similar to COVID-19 wherein religious adherents view these circumstances as the will of God (Wong-McDonald, Gorsuch, 2000). This study intended to explore religious coping within one religious grouping in South Africa, namely the Muslim population and whether their coping styles are related to their psychological well-being. Therefore, this study aimed to investigate psychological wellbeing, ways of coping and religious coping of the South African Muslim community during the COVID-19 lockdown period and ascertain if a relationship exists between the three.

Research aims of the study.

This quantitative study aims to investigate three psychological constructs namely, psychological wellbeing, ways of coping and religious coping among a sample of the South African Muslim population during the COVID-19 pandemic and to determine whether relationships exist between these three variables. In addition, this study aims to investigate the coping styles that predict psychological wellbeing among South African Muslims during COVID-19 which can provide useful insight into the mental health circumstances surrounding COVID-19 in South Africa and its population.

Research questions

1. What coping strategies are used by SA Muslims during the COVID-19 lockdown?

2. Do SA Muslims use religious coping during the COVID-19 lockdown?

3. How can the psychological wellbeing of SA Muslims during the COVID-19 lockdown be described?

4. Does a relationship exist between the coping strategies and psychological wellbeing of SA Muslims during the COVID-19 lockdown?

5. Does a relationship exist between religious coping and psychological wellbeing of Muslims during the COVID-19 lockdown?

6. Do coping strategies predict psychological wellbeing among South African Muslims during the COVID-19 lockdown?

Study Design & Sample

This study made use of a quantitative research design. An online survey was created to capture participant data. The Brief Cope Scale, Brief Religious Cope Scale, and Psychological Well-being Scale were used as measurement instruments. Demographic information was included in the survey as well as The Global Health and Mental Health Scale. The participants were identified using a nonprobability, convenient snowballing sampling technique. The survey was available online on the SurveyMonkey tool which could be answered through a mobile phone or desktop. The survey link was distributed via various social media platforms. The final sample consisted of 410 Muslims over the age of 18. The data was then analysed using SPSS software (version 27, IBM, 2020). The results from the analysis provided a description of data, the distribution of data, correlations of the constructs and regressions with its accompanying assumption testing which helped answer the research questions.

Outline of Chapters

Chapter One contextualizes our study which provides an outline of the COVID-19 pandemic. This is followed by the research aims, research questions and a brief overview of the study design and sample.

Chapter Two introduces the psychological concerns as a result of COVID-19. Thereafter the fundamental constructs in our study will be discussed in conjunction with their relevant theoretical underpinnings. These constructs are coping, religious coping and psychological wellbeing. Chapter two also addresses religion and mental health that sheds light into religious coping mechanisms. Together with this, Islam and mental health will be discussed to situate the study within our study participants. Finally, the literature review of previous studies is presented and discussed.

Chapter Three focuses on the research method that was used to answer the research questions. This includes the research design, sample, instruments, procedure, ethical considerations and data analysis.

Chapter Four presents the results of analyses. The results are presented in conjunction with the relevant research questions. Firstly, the descriptive statistics of coping styles, religious coping styles and psychological wellbeing is presented. Thereafter, results to ascertain a relationship between coping and psychological wellbeing, and religious coping and psychological wellbeing using inferential statistics is presented.

Chapter Five discusses the results of the study in context of past research. This chapter focuses on significant findings of the study by collating relevant literature to aid in the interpretation of the results. Thereafter, the limitations of this study and recommendations for future is discussed. A final concluding note closes this study.

Chapter Two: Literature Review

2.1. Introduction

Since the lockdown Statistics South Africa (Stats SA) online survey report indicated 60.1% of respondents were very and/or extremely concerned about the potential health consequences of COVID-19 and 93.2% of respondents were very and/or extremely concerned about a potential economic crisis as a result of COVID-19 (Stats SA 2020).

As the COVID-19 reached a global pandemic the primary psychological concerns were elevated levels of stress and anxiety (WHO, 2020). Stressors include the fear of falling ill, financial woes due to not being at work, feeling powerless and the fear of potentially infecting others (IASC, 2020). Lifestyle changes such as limited social interaction and not being at work can result in feelings of isolation which can exacerbate anxiety and depressive symptoms (WHO, 2020). An initial study conducted at the onset of the outbreak in China revealed that little over half respondents rated a moderate to severe psychological impact due to COVID-19 (Wang et al, 2020).

However, it has been previously suggested that the psychological outcomes during infectious outbreaks such fear, anxiety and depression should be acknowledged as normal adaptive responses to stressful situations (Sim, Chan et al, 2010). This suggests that anxiety and depression are expected in these unique and highly stressful encounters. In effect Lazarus and Folkman (1984) noted that a cataclysmic event which changes societal conditions can present lasting psychological effects. Previous studies on the psychosocial effects of outbreaks noted the effects on individual, community and international levels. The acute and long-term mental health concerns presented included anxiety, fear, trauma as well as loss of trust and resources, community fracturing and stigma (Van Bortel et al, 2016). However, it has been revealed that during infectious outbreaks social support within communities can greatly improve the negative responses as a result of the pandemic (Sim, Chan et al, 2010).

With the noticeable psychological impact of COVID-19 it is necessary to understand the coping strategies employed under these circumstances and the effect on psychological wellbeing. The aim of this study was therefore to investigate the relationship between coping strategies, religious coping strategies and psychological wellbeing among Muslims in South Africa during the COVID-19 pandemic.

The literature review presents three constructs that make up the study namely, coping, religious coping and psychological well-being and how they fit into understanding the effects of COVID-19. The theory

that guides this study is explored. In addition to this, the Islamic perspective of mental health and religious coping is presented.

2.2 Coping

2.2.1 Understanding coping

To understand the mechanisms of coping it is important to uncover its relationship to stress. In the physical sciences the historical usage of the term stress referred to the force of a load exerted against an object. This term later brought into use in psychology with a similar interpretation likens stress to a set of psychological and physiological reactions to an environmental demand (Seyle,1954). This "stress" results in feelings of anxiety as a psychological reaction to the stressful encounter. The relationship between the stress reactions and the environmental demand is a dynamic one as they interact with each other in a way to solve or reduce its effects on the body or mind (Lazarus, Folkman, 1984). This dynamic relationship can be better understood as coping. Stress is a shared universal experience. People recognize that the stresses related to work, family, and illnesses are a set of demands which forces them out of their normal state of being and/or functioning. The difference between individuals, however, is the way in which they are able to cope with these set of demands (Lazarus, Folkman, 1984).

The earliest work in understanding stresses on the human mind can be linked to Freud's conception of defence mechanisms. These defences were noted to be an unconscious reaction to stresses or unpleasant feelings or thoughts, suggesting that individuals make use of certain defence mechanisms when faced with challenging, stressful, and traumatic events. These defences were considered a tool to protect an individual from psychological distress. Defences are developmentally ranged from immature and neurotic defences to more complex and mature defences. Mature defences match coping by promoting psychological stability which results in more useful adaptations to stressful encounters. On the other hand, neurotic and immature defences are less adaptive and produce lower levels of positive psychological functioning as they are linked to a distorted reality. Much like mature defences, coping theory suggests coping to be a useful and purposeful response to a stressful situation (Cramer, 2015).

Coping and defence mechanisms share similar processes. *Rationalization* is a defence mechanism which demonstrates that an individual would try to logically make sense of a situation while actively denying the truth. A coping mechanism on the other hand with a similar process called *problem-solving coping* is considered a tool to objectively make sense of a situation while actively trying to make it better, thereby possessing a positive quality to its use (Lazarus & Folkman, 1984; Parker & Endler, 1995). As the development of coping in psychology began to take shape, defence mechanisms that were seen as a

positive adaptive response were considered a coping defence. This suggests that early coping theory were grounded in defence theory (Parker, Endler, 1995). Research have indicated that defence mechanisms and coping styles complement each other in the adaptation process, despite presenting different characteristics (Maricutoiu, Crasovan, 2016). The difference, however, indicates that defence mechanisms are a rigid and unconscious reaction while coping is a purposive and conscious reaction (Haan, 1965).

Coping is present in several situations as an adaptational response to psychological stress. These include workplace stress (Glazer, Liu, 2017), cancer-related distress (Langford et al., 2017) and more recently among healthcare workers during the COVID-19 pandemic (Vagni, Maiorano, Giostra, Pajardi, 2020). Coping offers an effective means to match the demands of a stress that results in improved emotional regulation and better mental health (Zimmer-Gembeck et al., 2018).

2.2.2. Coping defined

Lazarus developed the transactional model of stress which considered coping a mediator between the stress and reaction (Lazarus, Folkman, 1984; Genc, Pekić, Milovanović, 2020) The stress is a triggered response to the situation an individual assesses as being taxing on his or her psychological resources thereby affecting his or her well-being (Folkman, Lazarus, 1984). Coping is therefore a response to a stressful or distressing situation or experience which acts as a protective factor against psychological distress (Genc, Pekić, Milovanović, 2020). Coping and stress is a process wherein an individual assesses the stressful situation relative to how it may affect their wellbeing taking into account the coping resources they have at their disposal (Lazarus, 1981; Folkman, 1982). Coping research has been focused on the way individuals are able to overcome stressful situations. This is illustrated by individuals cognitively or behaviourally adapting to their surroundings resulting in an emotional or perceptual change (Genc et al., 2020).

As with early coping research, dispositional traits were considered important factors in the psychological reaction to stress, adding that personality traits were important determinants in understanding the reaction to stress (Parker, Endler, 1995). Despite this, studies have shown that the personality structure were less likely to determine coping patterns, proposing that each taxing situation limits the coping responses available, thus focusing on the appraisal of the situation as a predictor of the coping responses used (Billings & Moos, 1981; Folkman & Lazarus, 1985; Stone & Neale, 1984; Connor-Smith, Flachsbart, 2007). This means that coping responses are more likely to be determined by how an

individual would assess their current stressful situation and picking out an appropriate coping strategy to overcome the stressful effect, instead of the coping response being a result of their personality type.

2.2.3. Types of coping strategies

Understanding the function of coping, one can assess the type of coping strategies individuals would employ. Coping can either be directed externally by changing the situation or directed internally by changing the understanding or meaning of the situation (Lazarus, Folkman, 1984). Theory suggests coping can be understood in two dimensions. These are: changing or adapting the source of the stress, which produces the problem-focused dimension of coping and managing the emotions attached to the stress which results in emotion-focused coping (Folkman, 1984). Emotion-focused coping is associated with adapting to a distressing situation through emotional responses such as denial, focusing on and venting emotions, seeking out social support and reinterpreting events (Lazarus, Folkman, 1984). Problem-focused coping is an active response aimed at analytically evaluating the situation and trying to change its effects by developing strategies to solve the problem presented in the form of the stress (Lazarus, Folkman, 1984). Research suggests problem-focused coping strategies predicted efficiency in situations that are controllable, whereas emotion-focused strategies were favoured in uncontrollable situations (Chew, Wei et al, 2020; Lazarus, Folkman, 1984). Denial and planning coping strategies were related to post-traumatic stress symptoms among participants during the SARS outbreak, and has indicated that individuals need time to develop coping strategies whether problem-emotion focused or meaning-focused, adaptive to their negative emotional responses during challenging events (Sim, Chan et al, 2010).

Carver (1989) suggested the dimensions that made up emotion-focused coping and problem-focused coping were diverse and thus needed to be measured separately. With the result a scale was developed based on the theoretical knowledge of Lazarus (1984) cognitive model of stress and coping. This COPE scale is made up of 14 conceptually distinct scales that are grouped into functional emotion-focused coping, problem-focused and less-than functional coping which are analysed separately. The coping styles are further categorized according to their functionality as shown in Table 2.1. Problem-solving coping is considered functional and is comprised of *active coping*, *planning,* and *seeking out instrumental support*. Emotion-focused coping can be categorized as functional such as seeking out *emotional support*, *positive reframing*, and *acceptance*, or as functional/less than functional as seen by *venting* and *denial.* This means that these two coping styles (venting and denial) can either be a benefit or drawback depending on the situation and extent to which the coping style has been used. *Religion*

coping style is considered a functional coping style and is seen to be both a problem-solving and an emotion-focused coping strategy. The final 4 coping styles are categorized as less than functional and are neither emotion-focused nor problem-solving focused. These are *behavioural disengagement*, *mental disengagement*, *self-distraction*, *self-blame,* and *substance use*.

Table 2.1 *Carver's coping domains*

Domain	**functional/ less than functional**	**Coping style**	**Coping style described**
Problem-focused coping	Functional	*-Active coping*	Active attempt to reduce effects of stress
		-Planning	Process of thinking how to reduce effects of stress.
		-Seeking out instrumental support	Seeking advice from others
Emotion-focused	Functional	*-Seeking out emotional support*	Seeking moral support and/or understanding from others.
		-Positive reframing	Managing the emotions because of the stressor.
		-Acceptance	Accepting the events that occurred
	Functional/ less than functional	*-Venting*	Ventilating emotions that resulted from the stressor
		-Denial	Denying the events that occurred
Emotion and Problem focused	Functional	*-Religion*	Turning to religion to offer emotional support or to actively cope with stressor
Less than functional	Less than functional	*-Behavioural disengagement*	Giving up the attempts to deal with stressor
		-Mental disengagement	Taking one's mind off the stressor by engaging in other activities
		-Self-blame	Blaming oneself for the events that occurred
		-Substance use	Using alcohol or drugs to cope with the stressor

Note. Adapted from *Assessing Coping Strategies: A Theoretically Based Approach* by Carver, Scheier & Weintruab (1989)

2.3 Religion

2.3.1. Religion and mental health

Research has shown interest in exploring the relationships between religion and mental health (Aranda, 2008). Religion is seen to be multifaceted, constituting a way of living guided by religious values, belief systems and ritualistic acts. Religion falls within two categories, substantive or functional. A substantive definition considers the driving force of religion namely, what is considered sacred. Emotions, behaviour, and relationships are understood by how they are seen to be sacred in terms of a transcendent or high power (Bruce, 1996). A functional definition examines how religious practices and beliefs serve to function in an individual's life such as helping make sense of fundamental issues of purpose, meaning, death and suffering (Bruce, 1996; Pargament, 1997). In relation to these perspectives of religion, Gordon Allport's theory of intrinsic and extrinsic religious orientation states that an individual would consider religious practices and beliefs for the intrinsic value it holds whereas an extrinsic orientation is focused on the utilitarian purposes it may serve such as social desirability, safety or any other secular goals (Allport, 1966).

There has been debate as to whether religion and religious orientation are unique to human behaviour and should form part of a unique psychological research paradigm. The basis for this approach to an independent lens of research stems from the idea that religious beliefs, practices, and orientation forms a separate unique process that cannot be reduced or interpreted solely by other psychological processes (Paloutzian, Park, 2005). This provides a unique approach to how religion can be interpreted and utilized in research, and in particular the role it may play in how individuals may perceive, react and ultimately act under various circumstances when providing it with precedence over other psychological explanations. Understanding the unique psychological processes which underpin religious ideation among adherents can also help to make sense of the role it can play in coping and adjustment, making it necessary in this research where the focus is on coping among a religious denomination, namely Muslims in South Africa.

The difference which makes religion distinct from other psychological processes is that it provides its adherents with a sense of ultimate meaning by holding value or attachment to practices, symbols or beliefs which they consider sacred (Paloutzian, Park, 2005). Religion holds strong positive association with meaning in life, even in contexts where meaning and purpose in life are challenged (Papaleontiou-Louca, 2021). Religion also serves a social function by fostering values of kindness, forgiveness, charity and generosity towards others which strengthen social bonds (Papaleontiou-Louca, 2021).

These social bonds which develops support structures aids in times of loss or stress by regulating emotional states and dysfunctional behaviour (Koenig & Larson, 2011, as cited in Papaleontiou-Louca, 2021). Purpose in life and social support were found to mediate a relationship between religiosity and psychological distress, indicating strong protective effects of religiosity on psychological distress ($\beta = -.40$, $p < .01$) in the presence of purpose and social support (Wang, Koenig, Ma, Al-Shohaib, 2016).

Meaning can relate to "purpose, intent, order, sense, interpretation, signification and denotation" (Paloutzian, Park, 2005). When we consider the term meaning, we think about what connects it to what we already understand or know, thus relating it to "connection" or "connectedness". Baumeister noted that the meaning of religion is "that which connects", suggesting that meaning and religion are intimately related (Paloutzian, Park, 2005). Kenneth Pargament indicated that religion as a meaning-system is different as the individuals' focus are on what they consider sacred (Pargament, 2007). Research has suggested that individuals meaning-systems are related to the way in which they carry out their everyday lives to coping with adversity, adding that stressful experiences can result in more religious responses (Park, Silberman, 2005; Pargament, Ano, Walchotz, 2005).

One way to understand meaning from a theoretical perspective is to investigate existentialism as a concept which underpins the way humans make sense of their existence (Wardle, 2016). In relation to meaning, existentialism in psychology and psychotherapy focuses on humanistic concepts such as freedom, isolation, meaning and death. Existential psychotherapy considers the way in which individuals make sense of these concepts which then represents their "ultimate concerns" (Yalom, May; Wedding, Corsini, 2013). These ultimate concerns are seen as fundamental challenges to the human condition (Yalom, May, 2013). Existential questions such as the nature of loneliness, anxiety, grief and despair take centre stage in the Covid-19 pandemic wherein death, health and being able to connect with others are the very themes permeating every human life. With this, it is noted in existential psychotherapy that meaning can be created from experience and self-reflection, and any authentic experience is preceded by superficial explanations (Yalom, May, 2013). This suggests that COVID-19 pandemic may produce feelings associated with religion and religious meaning-making.

2.3.2 Religion and coping

Research suggests that religion can serve multiple areas of an individual's coping experience and that can aid their psychological well-being. These include the ability of making meaning out of their situation, personal growth and personal mastery (Paloutzian, Park, 2005). Religious coping allows individuals to view difficult situations as having a higher meaning, an opportunity to grow themselves into better

individuals and gain more control in their lives by placing the experience as a test from God (Paloutzian, Park, 2005).

Levin, (1996) Oman and Thoresen, (2002) have identified four areas which religious and spiritual activities and groups can influence physical and mental health or act as a buffer against stressful events. These include spiritual and religious groups encouraging healthy behaviours and to respect the body given to you by God. This is illustrated by strict denominations discouraging smoking and drinking of alcohol as well as encouraging healthy eating habits (Troyer, 1988). Another factor is they may enhance feelings of joy, optimism, and gratitude necessary for mental wellbeing. Adding to this, research has found that religious and spiritual practices can also reduce negative emotional states such as fear, sadness and death anxiety (Ciarrocchi et al., 2005; Oman, Thorensen, 2005). The third factor is they can offer ways to cope with stressful situations. As stated by Pargament (1997), "religious coping offers a response to the limitations of personal powers", suggesting that in religious coping there can be a resolve in events that are beyond our control. Finally, the fourth factor is to provide a social support structure to its adherents. Evidence for social support draws from Durkheim's perspective of religious practices transmitting shared values and dispositions among adherents aiding well-being, with evidence suggesting worship service attendance in the reduction anxiety symptoms among religious adherents (Bartowski, Acevedo, Van Loggerenberg, 2017).

2.3.3. Islam and mental health

From a religious orientation, Islam can be understood as the "submission to the will of God" (Drennan, 2012). The followers of Islam, known as Muslims, prescribe to the five tenets of faith or "pillars of Islam" which make up the fundamental attributes of a Muslim's life (Esposito, Cornell, 1999). In addition to Islam representing faith in one God, it represents a way of life that includes spiritual, social and political aspects (Ball, Haque, 2003; Faruqi, 2007). The five tenets of faith include, *Imaan* (faith), *Salah* (prayer), *Zakat* (charity), *Saum* (fasting) and *Hajj* (pilgrimage) in order of precedence. This means that the first aspect to a Muslim's life is to have *Imaan*, or faith. This is emphasized by *Kalimah-Shahada* known as a testimony of belief before an individual accepts the religion of Islam translated briefly as bearing witness to the Oneness of God and accepting Muhammad (peace be with him) as the last messenger (Haq, 1984). The Oneness of God is also referred to as *Tawhid*, encompasses the most important aspect of the Islamic belief system. The rest of the tenets of Islam, are in accordance with the concept of *Tawhid*.

Aspects which fall within this concept of *Tawhid* in the Islamic tradition are *Fitrah* and *Qadr*. Muslims believe in *Fitrah,* referring to a natural inclination towards God and *Qadr*, referring to recognizing and

accepting God's decree (Haque, 2018; Al-Haddour & Broeckaert, 2018). *Qadr* in relation to a coping strategy can be illustrated by Pargament (2007) wherein religious coping is seen as a response to difficult situations by recognizing the limitations individuals possess, which then make sense of the acceptance to God's will. In relation to *Fitrah* and the development of a psychotherapeutic model of Islamic psychology, a qualitative study revealed, "Participants seemed to agree that the primary reason for most psychological problems is a misalignment with the *fitrah.*" (Rothman, Coyle, 2018). This indicates that *fitrah* holds an important function in understanding mental health from the Muslim perspective.

Muslims recognize the positive role religion plays in their lives. Religious practices which are primary elements in the lives of Muslims plays a role in contributing to wellbeing (Abu-Raiya, 2009). To put this into perspective, psychological wellbeing and religious beliefs are suggested to be positively correlated when Muslims identify as religious resulting in greater levels of health and happiness compared to those with liberal religious beliefs (Green, Elliot, 2010).

With regards to spiritual practices, frequent congregational worship in Islam resulted in positive wellbeing which was associated with reduced anxiety and related symptoms (Bartowski, Acevedo, Van Loggerenberg, 2017). In addition, Muslims believe their religion can aid in coping with mental health dysfunction such as depression rather than receiving conventional mental health treatment (Lowenthal, Ginnirella, Evdoka, Murphy, 2001). In light of psychological wellbeing and religious practice, a study on the impact of fasting on psychological wellbeing found that fasting can positively contribute to multiple areas of wellbeing (Bayani, Esmaeili, Ganji, 2018). Participants were shown to produce higher levels of environmental mastery, meaning they had control over their surroundings and make positive use of opportunities. As fasting is a means of self-restraint over food as well as curbing behaviours such as lying and slandering it can act as a means to attain mastery over oneself (Bayani, Esmaeili, Ganji, 2018). This relates to how religious practices can inform on improved and long-term psychological wellbeing.

2.3.4 Measuring religious coping

Kenneth Pargament defines religious coping as a support mechanism in which the intimate aspects of an individual such as purpose, meaning, emotional comfort, spirituality, personal control and intimacy with others can be maintained and supported during times of stress and major life events (Pargament 1998). Pargament views religious coping as a multidimensional construct and that in a stressful situation religious beliefs and practices form part of the individual's coping method (Pargament, 1998). These religious coping methods reconciles an individual's religious orientation to the stressful experience

(Pargament, 1997). Religious coping functions to maintain the sacred, such as values, goals, and beliefs after having experienced psychological distress in the form of trauma or loss (Paloutzian, Park, 2005). These religious coping methods plays a role in the individual's acceptance, acknowledgement of loss, letting go and moving on (Park, Folkman, 1997). Religious coping is shown to be a more active than passive coping strategy (Pargament, Park, 2005).

Religious coping comprising of 21 religious coping activities has been developed through interviews with religiously practising individuals as well as sources of religious coping found in literature (Pargament, Koenig, Perez, 2000). Religious characteristics and functions can be represented in religious coping as seen in Table 2.1 in the form of: the search for meaning, the search for mastery and control, the search for comfort and closeness to God, the search for intimacy and the search for life transformation (Pargament, 2007). Religious coping polarized as positive and negative coping dimensions as seen in Table 2.1 is classified into, *benevolent religious reappraisal*; *punishing god reappraisal*; *demonic reappraisal*; *reappraisal of god's powers*; *collaborative religious coping*; *seeking spiritual support*; *religious focus*; *religious purification*; *spiritual connection*; *spiritual discontent*; *interpersonal religious discontent* and *religious forgiving* (Pargament, Raiya, 2007). These groupings constitute the spectrum of the religious coping system.

Paloutzian & Park (2005) have indicated that religious coping can harmful or helpful as they are dichotomised between positive and negative coping (Paloutzian, Park, 2005). Positive religious coping styles that are useful in situations of stress are the feeling of having a secure relationship with God and having a spiritual connectedness with others. The negative coping styles that are less than helpful and even maladaptive are the ones that indicate an insecure relationship with God and with members of religious congregation (Paloutzian, Park, 2005). Religious coping were commonly found among health and illness related contexts (Jenkins, Pargament, 1995; Keefe et al, 2001; Pendlton et al, 2002). In addition, research focused on mental illness and coping in the form of religious practice is seen to be predictive of better mental health (Tepper et al, 2001).

Table2.2 *The methods of religious coping*

Religious coping methods	**Coping Domain**	**Sub-type**	**Item in scale**
Find Meaning	Positive	Benevolent Religious Reappraisal	*Tried to see how God may be trying to strengthen me in this situation*
	Negative	Punishing God Reappraisal	*Felt punished by God for my lack of devotion.*
	Negative	Demonic Reappraisal	*Decided the devil made this happen*
	Negative	Reappraisal of God's Powers	*Questioned the power of God*
Gain Control	Positive	Collaborative Religious Coping	*Tried to put my plans into action together with God*
Gain Comfort and Closeness to God	Positive	Seeking Spiritual Support	*Sought God's love and care*
	Positive	Religious Focus	*Focused on religion to stop worrying about my problems*
	Positive	Religious Purification	*Asked for forgiveness for my sins*
	Positive	Spiritual Connection	*Looked for a stronger connection with God*
	Negative	Spiritual Discontent	*Wondered whether God had abandoned me*
Gain Intimacy with Others and Closeness to God	Negative	Interpersonal Religious Discontent	*Wondered whether my religious institutions had abandoned me*
Achieve a Life Transformation	Positive	Religious Forgiving	*Sought help from God in letting go of my anger*

Note. Adapted from *the many methods of religious coping: development and initial validation of the RCOPE* by K. Pargament, H. Koenig, L. Perez (2000)

2.4. Psychological well-being

2.4.1. The foundations of psychological well-being

The ability to function positively and effectively and maintaining positive thoughts and feelings are described as positive psychological functioning (Kubsanzky, Boehm, et.al., 2015). Positive psychological functioning has its roots in positive mental health. The World Health Organization describes positive

mental health as, “a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to contribute to his or her community” (World Health Organization, 2004). Positive mental health and positive psychological functioning are concepts developed under the positive psychology framework. Positive psychology emerged from humanism which is a step away from psychopathology and instead focuses on human strengths, resilience and flourishing (Seligman & Csikszentmihalyi, 2000). A study has shown positive psychology to be largely influenced by humanist psychology in the understanding of the self, such as the need for meaning and self-esteem (Resnick, Warmoth, Serlin, 2001).

Psychological well-being goes hand-in-hand with positive psychological functioning and is consequently described as social and emotional competence derived from thinking patterns and behaviours that provides a potential for healthy engagement, meaning and self-realization (Keyes, 2002; Huppert, 2005; Wells, 2010). Making psychological well-being a holistic construct in describing positive functioning. Psychological wellbeing also focuses on individual’s evaluation on themselves. This includes recognizing positive aspects of one’s nature and functioning such as growth, purpose, relationships, and being self-determined (Ryff, 1995).

Early researchers understood well-being in terms of happiness and life satisfaction (Andrews, McKennel, 1980; Bradburn, 1969; Kahneman, et.al., 1999). Initially, well-being was made up of positive and negative effect and happiness was a state of positive functioning between these two effects (Bradburn, 1969). This was further emphasised as a hedonic state of psychological functioning, dating as far back as the fourth century B.C. Aristippus a Greek philosopher suggested that pleasure and happiness should be the aim in life (Ryan, Deci, 2001). These constructs, however, describe a more subjective state of wellbeing and are aspects which are guided by immediate gratification, whereas psychological wellbeing is seen as a more holistic and long-term mental state (White, Eyber, 2017). Human flourishing and living to one’s full potential are elements that make up the eudaimonic state of psychological functioning, also known as psychological wellbeing (Disabato, et al., 2016).

This can be understood by Ryan & Deci (2000) Self-Determination Theory, where wellbeing is seen as the pursuit of goals which are meaningful and are authentic to the self (Deci, Ryan, 1985; Ryan, Deci, 2000). This authenticity is linked to higher self-esteem and feelings of autonomy, as well as positive emotions such as hope and cheerfulness (Ryan, LaGuardia, Rawsthorne, 2005). South African author Wissing (2006) has indicated that the hedonic view of wellbeing is focused on happiness while the eudaimonic view is focused on how well people are living.

These understandings of psychological wellbeing as well as Maslow's theory of self-actualization (2013), Allport's understanding of maturity (1961) and Roger's conception of a fully functioning person (1967) all formed the framework in which Ryff and Keyes (1995) developed an all-encompassing theory of psychological wellbeing. In addition to the attributes of psychological wellbeing, the humanist psychology of Carl Rogers stated qualities related to autonomy, self-acceptance and personal growth and the need for functional relationships are necessary in a fully functioning person (Rogers, 1962).

2.4.2. How is psychological well-being measured?

Ryff and Keyes (1995) constructed a multidimensional model of wellbeing on the foundation of previous understandings of positive functioning. Ryff and Keyes (1995) thereafter developed six measurable attributes of psychological well-being as seen in Table 2.3, namely: autonomy; self-acceptance; personal growth; positive relations with others; purpose in life and environmental mastery (Ryff, Keyes, 1995). These dimensions make up what is considered an all-encompassing construct of psychological (eudaimonic) wellbeing. As stated in Table 2.3, self-acceptance is evaluating one's present and past self positively. Personal growth is an individual's ability of continual growth and development. Purpose in life suggests that one has purpose and meaning in their lives. Positive relations with others indicates that one has positive and healthy relations with others. Environmental mastery is the ability to manage one's life and surroundings and autonomy is having self-determination (Ryff, Keyes,1995).

Of the initial studies examining the structure of the wellbeing scale indicated that purpose in life and personal growth showed a decrease with age, indicating that older respondents scored lower than younger respondents. Environmental mastery, autonomy and positive relations with others increased with age and self-acceptance indicated no age increments. Positive relations with others showed a gender differential, with women scoring higher than men (Ryff, Keyes, 1995).

Table 2.3 *Domains of psychological well-being*

Domain	**Description**	**High and Low Scores**
1.*Self-acceptance*	Accepting one's limitations and having a positive self-regard	High: individuals who accept their flaws; have a positive attitude Low: individuals who are unsatisfied with themselves
2.*Positive relationships with others*	Pleasure gained from close relationship with others	High: individuals have warm, trusting relationships; have empathy Low: few close, trusting relationships; feel isolated
3. *Autonomy*	Ability to pursue own wishes and make decisions based on their own values and not easily influenced by others	High: individuals are independent; do not fall easily to social pressure Low: concerned with what others think; depend on others' opinions
4. *Environmental mastery*	Ability to manage their environment and create environments that promote positive mental state	High: competent in their surroundings; make use of opportunities to their benefit Low: feel a lack of control; difficulty in changes of environment
5. *Purpose in life*	Ability to find meaning and set goals to achieve purpose in life	High: individuals who have goals; believe their life has meaning, past and present Low: no sense of direction; no goals
6. *Personal growth*	Ability to realize one's potential and seek out new experiences.	High: individuals feel they are fulfilling their potential; look for opportunities to develop Low: Lack of interest; feel incapable of developing new skills

Note. adapted from Ryff, 1995 & Hidalgo, Bravo, Martinez et.al., 2010

2.4.3. The relationship between coping and psychological well-being

How an individual would cope in a stressful situation has an impression on their health and wellbeing. Efficient coping can result in many positive psychological outcomes such as happiness, personal development, life satisfaction and job performance (Loukzadeh, Bafrooi, 2013). A study on university students determined a statistically significant relationship between the type of psychological wellbeing and coping styles used, suggesting that the higher the psychological wellbeing profile was, the greater use of stress coping strategies (Freire, et al., 2016). Coping styles that are significant with lower levels of wellbeing were seen in a study comparing the coping styles of parents with children who are diagnosed with Autism Spectrum Disorder (ASD) and parents of children who are labelled as "typically developing". This study indicated that parents with ASD children possessed greater use of avoidance coping than parents with typical developing children and produced a higher use of problem-solving coping, suggesting that their parental stresses results in them resorting to using a more maladaptive coping strategy (avoidance), but also compels them to be more problem focused. However, these coping styles were consistent with lower levels of psychological wellbeing (Lai, et al., 2015). This highlights the importance of external factors such as life circumstances in the relationship between coping and psychological wellbeing. Emotional coping strategies are used to alleviate or regulate emotions associated with a stressful event, however, contains features that are considered maladaptive (Mayordomo et al., 2016). A study testing the effectiveness of coping strategies on wellbeing and resilience in a sample of Spanish adults between the ages of 35-64 years old has found psychological wellbeing to be negatively predicted by emotional coping, confirming that some elements of emotional coping are less than beneficial (Mayordomo et al., 2016). Approach orientated coping (active coping and seeking instrumental support) showed greater influence on psychological wellbeing among a sample of Taiwanese nurses, suggesting that occupation, context and culture can make sense of the differential outcomes to coping strategies employed (Lee, Tzeng, Chiang, 2019).

2.4.4. The relationship between religious coping and psychological wellbeing

Religious coping can be made up of various systems of practice such as religious rituals, seeking support from congregations, and examining events through relationship with God which converge into positive and negative domains that impact wellbeing (Pargament et al., 1998; Krägeloh et al., 2012; Adam, Ward, 2016). Hedonic wellbeing is subjective state of wellbeing such as positive affect or negative affect which describes the spectrum of positive and negative emotions experienced at a given time (Lyubomirsky, 2011). In a study (Kaliampos, Roussi, 2015), religious coping was the only predictor of positive affect (subjective wellbeing) in a sample of individuals undergoing chemotherapy, indicating that religious coping can positively contribute to wellbeing in highly

stressful situations and major life events. Similarly, a longitudinal study on religious coping has found that positive religious coping consistently predicted wellbeing (positive affect), and negative religious coping predicted negative affect over a 2.5-year period (Park et al., 2018). This posits the contribution of religious coping to wellbeing over extended periods of time.

A fundamental feature which makes up both religion and psychological wellbeing is the need for meaning and purpose (Krok, 2015). Meaning and purpose are indicators for positive psychological wellbeing and religion offers a means to achieve purpose and meaning in life (Aflaksier, 2012; Wong, 1989). It is accepted that religious coping contributes to psychological wellbeing by offering a coping strategy wherein personal meaning can be derived from stressful and major life events (Park, 2007; Lichtenthal, Burke, Neimeyer,2011; Krok, 2015). Krok (2015) study on religious coping and psychological wellbeing was geared towards validating *meaning* as an internal structure in both coping and psychological well-being. This study has found meaning to partially mediate a relationship between negative religious coping and psychological wellbeing suggesting an underlying presence of meaning between religious coping and psychological wellbeing.

2.4.5 Muslims religious coping and psychological wellbeing

Islamic principles make up the fundamental attributes of a Muslim's life contributing to their wellbeing (Abu-Raiya, 2009). Islam constitutes a way of life and Muslims rely on their religious belief and teachings as a way to cope with life stressors (Abu Raiya & Pargament, 2011; Adam, 2015).

Muslims engaging in religious coping strategies were found predominantly in university student samples (Adam, Ward, 2016; Khan, Watson, 2006; Gardner et al,. 2014; Aflakseir, Coleman, 2011) also among refugees (Ai, Peterson, 2003; Shaw et al,. 2019) and featured in major life events such as cancer- related and trauma events (Khan, et al., 2009; Sharif, 2018; Berzengi, et al., 2017). These studies established the connection between negative religious coping and negative psychological outcomes among the Muslim population. From among these studies it was revealed that negative religious coping was correlated to and a significant predictor of Posttraumatic stress disorder (PTSD), additionally those with PTSD scored higher on negative religious coping strategies (Berzengi, et al., 2017). Negative religious coping was closely associated with death depression (Sharif, et al., 2018), with higher levels of stress (Khan, 2006; Gardner, 2014), had predicted psychological distress (Khan, 2009) and was correlated with psychiatric morbidity (Alfaksier, Coleman, 2011). These studies indicate the exceedingly negative impact negative religious coping has on psychological outcomes among Muslim population. As a result, these psychological consequences can have lasting effects on overall wellness and functioning. This therefore posits the significance of religious coping on the Muslim population.

In order to understand the extent of religious coping on wellbeing among Muslims, various studies were examined in the following situations. In war-related contexts (Abu-Raiya, et al., 2020), those experiencing loss (Abu-Raiya, et al., 2019), technological stressors among students (Abbas, et al., 2020) and the acculturation stress in a Western community (Adam, Ward, 2016).

A study conducted among Jewish and Muslim participants produced findings corresponding to previous studies on religious coping and psychological outcomes (Abu-Raiya, et al., 2020). Negative religious coping was associated with lower life satisfaction and increased depressive symptoms, whereas religious affiliation and religious self-determination moderate the relationship between positive religious coping and life satisfaction. The correlation between positive religious coping and negative religious coping was higher in Jewish participants and the correlation between positive religious coping and life satisfaction was higher in Muslim participants.

In a study investigating the interactional role of death experience on religious coping and wellbeing among Palestinians has found significant results. In this study positive religious coping was positively associated with positive affect and life satisfaction, whereas negative religious coping was positively associated with negative affect. The correlation between positive religious coping and life satisfaction was found to be greater in those who witnessed a sudden death than an expected death. Negative religious coping showed a significant associated only among those who witnessed an expected death (Abu-Raiya, 2019).

According to the study measuring psychological wellbeing and religious coping among university students in relation to technological stress it was found a significant positive correlation between religious coping and psychological wellbeing ($r=.565$; $p<0.01$). However this study did not incorporate the complete domain of psychological wellbeing. This can be seen by psychological wellbeing being measured by only hopefulness and feeling good about oneself (Abbas, et al., 2020).

Adam's (2015) study on the acculturating stress, coping and wellbeing on New Zealand Muslims made use of a coping instrument adapted for the Muslim sample. This study produced results that indicate religious coping to independently predict life satisfaction. This suggests that religious coping played a supportive role in life satisfaction despite experiencing the stressors of assimilating in a western community. However, this study describes the subjective state of wellbeing ie. Life satisfaction, and the current study is concerned with a more long-term integrative and fulfilling state of wellbeing.

2.5 Conclusion

This study was focused on investigating the relationship between coping and psychological wellbeing among South African Muslims during the COVID-19 pandemic. The literature provided an overview of the theoretical underpinning of each psychological construct namely, coping, religious coping and psychological wellbeing. It also included a summary of mental health and coping in Islam. This was to situate and provide a knowledgeable base in understanding the relationship between coping and psychological wellbeing specific in this population. As indicated Muslims hold much significance to their religion and it is suggested that they turn to their faith in times of distress. Many studies have indicated that such a relationship between coping and psychological wellbeing does exist in various populations and contexts and that coping plays a role in wellness. However, not many studies have investigated the role of religious coping and psychological wellbeing were found in a Muslim sample. The most recent studies have investigated the relationship between religious coping and subjective wellbeing, which describes a more short-term mental state. This current study was focused on psychological wellbeing which is a more long-term and integrative mental state that encompasses emotional and social competence and the need for meaning. As a result, there is an unequivocal need to investigate this relationship specific in a Muslim sample which can expand on the role religion plays in mental health that can address the cultural and religious implications of psychological interventions.

Chapter Three: Research Methods

3.1. Introduction

This chapter presents the method used in conducting this research. First the aims and hypotheses are presented, thereafter stating the research design, followed by the sample and sampling strategy and then expanding on the instruments that made this research possible. Included in this chapter is the procedure followed in carrying out this research, the ethical considerations and the data analysis techniques used in answering the research questions.

3.2. Aims

This quantitative study aims to investigate three psychological constructs namely, psychological wellbeing, ways of coping and religious coping among a sample of the South African Muslim population during the COVID-19 pandemic and to determine whether relationships exist between these three variables. In addition, this study aims to investigate the coping styles that predict psychological wellbeing among South African Muslims during COVID-19 which can provide useful insight into the mental health circumstances surrounding Covid-19 in South Africa and its population.

3.3. Research questions

1. What coping strategies are used by SA Muslims during the COVID-19 lockdown?

2. Do SA Muslims use religious coping during the COVID-19 lockdown?

3. How can the psychological wellbeing of SA Muslims during the COVID-19 lockdown be described?

4. Does a relationship exist between the coping strategies and psychological wellbeing of Muslims during the COVID-19 lockdown?

5. Does a relationship exist between religious coping and psychological wellbeing of Muslims during the COVID-19 lockdown?

6. Do coping strategies predict psychological wellbeing among South African Muslims during the COVID-19 lockdown?

3.4. Hypotheses

1. A relationship exists between South African Muslims' religious coping and psychological wellbeing during COVID-19 lockdown.
2. A relationship exists between South African Muslims' coping styles and psychological wellbeing during COVID-19 lockdown.

3. Coping strategies predicts psychological wellbeing among South African Muslims during COVID-19 lockdown.

3.5. Research design

This study made use of a quantitative research design. There was no manipulation of independent variable, no control groups, no random assignment which made this a non-experimental design. The data was collected at one point in time making this research design cross-sectional (Barker, Pistrang, & Elliott, 2002). In addition, this research is correlational as it investigated relationships between constructs (Barker, Pistrang, & Elliott, 2002).

3.6. Sample and sampling

The sample consisted of individuals representing the South African Muslim community. The selection criteria required participants to identify their religious denomination as Islam, being over 18 and having experienced lockdown due to COVID-19 in South Africa, making the sample pool congruent to fit the aims of the study.

The sampling strategy used was a non-probability convenience sampling. The questionnaire available on the SurveyMonkey web-based link were sent out to friends and family members through online platforms such as WhatsApp, Facebook and Instagram. Additional participants responded to the link through family and friends sending out the survey resulting in a snowballing effect. The survey was also available on Facebook page of the Muslim Student Association of South Africa, targeting a pool of young participants. A Muslim organization Awqaf SA helped circulate the survey to South African Muslims in their database. These efforts resulted in just over 500 responses. The final sample was made up of 410 responses after excluding responses that were incomplete and/or did not identify as Muslim. This sample size was sufficient for analysis and reporting based on the rule of thumb of 3 participants for each item requiring approximately 350 participants (Kline, 2000).

The final sample consisted of 410 participants which was represented by 289 (70.7%) females and 119 (29.1%) males. Majority of the participants were Indian (93.6%) and almost all indicated English (99%) as their home language. The highest number age groups were 25–34-year-olds (25.9%) and 35–44-year-olds (25.2%). The rest of the sample was represented by 18–24-year-olds (15.4%), 45–55-year-olds (14.4%), 55–64-year-olds (12.5%), 65–74-year-olds (6.1%) and, 75 or older (0.5%). Level of religiosity reported a mean of 3.59 (SD = 0.8) suggesting that most participants felt more religious than not so religious.

More than half participants were married, 276 (67.5%), and 121 participants were single (29.6%). A little over half (57.7%) lived in a household with 4-6 people, followed by 27.4% living in a household

of 2-3 people, 11.5% of participants lived with 7 or more in the household and only 2% of participants lived alone.

An additional variable was created as “COVID risk” which was coded from responses in age and medical history. Participants over 65 and/or those stating a medical condition that makes them vulnerable to the severe effects of COVID-19 such as asthma, diabetes, heart disease and cancer were coded as “high risk”. The rest of the sample that were below the ages of 65 with no medical condition that fit those criteria were stated as “low risk”. This variable was created to provide a clearer indication of the number of those who present a high risk to the devastating effects of the virus which includes the elderly and those with underlying health conditions and who would then be more likely to experience distressing psychological effects (WHO, 2020). Majority of the sample, 298 (72.9%) participants were classified as “low-risk” while 111 (27.1%) participants were considered COVID-19 “high risk”.

3.8. Instruments

The questionnaire as seen in Appendix C (pg.84-90) included 4 sections which was made up of participant demographics, the Patient-Reported Outcomes Measurement Information System scale (PROMIS) (Health Measures, 2020), the Brief COPE scale (Carver, 1997), the Brief Religious COPE scale (Pargament et al., 2011), and the Psychological Wellbeing scale (Ryff, 1995).

3.8.1. Global Health and Global Mental Health Scale

The Patient-Reported Outcomes Measurement Information System (PROMIS) (Appendix C, pg.85) assesses the wellbeing in the physical and mental areas of health. The PROMIS self-report scale measures 4 items each for the physical health scale and mental health scale. The physical health scale measures general physical health, pain and fatigue. The mental health scale measures general mental health, sociability and relationships, quality of life and emotional problems. Internal consistency reliability measuring the Cronbach alpha for each scale was 0.73α for Global Health and 0.81α for Global Mental Health (Hays, Schalet, Spritzer, Cella,2017). Items are based on a 5-point likert scale. For each scale the possible lowest score is 4 and maximum score 20 (Health Measures, 2020). A high raw score means more of the concept being measured (Health Measures, 2017). In this case more positive physical and mental health.

The use of the Global Health and Mental Health questionnaire in this study will aid in the analysis process by identifying key characteristics in physical and mental health which plays a role in anxiety and stress (Maan, Diong, Bishop, Enkelmann, 2005) and provide a screening measure of the overall health of participants in the study. It may be used to exclude individuals who score overly high on either or both of these controlling for sampling bias. The physical health and mental health subscales

of this study were used as predictor variables in the regression models to help uncover if physical health or mental health fits in our model as predictors to psychological well-being among this sample. Table 3.1 below indicates a mean of 15.43 (SD = 2.83) for physical health and a mean of 13.55 (SD = 3.27) for mental health in this sample. Skewness for physical health (-1.23) and mental health (-0.42) are both negatively skewed but are acceptable for use in a parametric statistical test (Privitera, 2016).

Table 3.1 *Physical and Mental health subscales descriptive statistic including reliability co-efficient.*

Variable	**N**	**Min**	**Max**	**Mean**	**SD**	**Skewness**	**Internal consistency reliability**
Physical Health	408	5	20	15,43	2,838	-1,236	.70 α
Mental Health	408	5	20	13,55	3,273	-0,424	.80 α

3.8.2. Brief COPE questionnaire

This questionnaire is the shortened form of the 60 item COPE inventory by Carver (1989) (Appendix C, pg.86-87). This 28-item short form similar to its predecessor looks at the way in which individuals respond to stress. This scale measures 14 coping reactions or subscales, each conceptually unique with 2 items measuring each of these reactions (Carver, 1997). The 14 coping reactions are: mental disengagement (self-distraction); active coping; denial; substance use; use of emotional support; use of instrumental support; behavioural disengagement; venting; positive reframing; planning; humour; acceptance; religion and self-blame. The scales form the dimensions of coping such as problem-solving coping, emotion-focused coping and less than helpful coping responses (Carver, 1997).

This scale measures items on a 4-point likert scale, ranging from 1- “I haven’t been doing this at all” to 4- “I have been doing this a lot”. Item examples that measure the different coping dimensions are: “I’ve been turning to work or other activities to take my mind off things” and “I’ve been taking action to try to make situation better”.

The 14 subscales are comprised of 2 items each. The raw scores for each subscale would range from the lowest measure of 2 to the highest measure of 8. High scores indicate greater use of that specific coping strategy. There are no reverse scoring and no total scores. The subscale scores are treated separately in analysis.

The Brief Cope has previously shown considerable internal consistency reliability for each of the 14 subscales with omega values ranging from 0.70Ω to 0.97Ω (Monzani, Dario, Patrizia et al, 2015).

Reliability of the Brief COPE in a South African context indicated considerable reliability with alpha values ranging from 0.86α to 0.92α (Louw, Viviers. 2010).

The reliabilities of the Brief Cope Scale were favourable in this sample with a high of 0.85 α (humour) to a low of 0.45 α (self-distraction). The co-efficient of subscales, Venting (.47) and Self-distraction (.45) were considerably low falling below the generally accepted range of 0.6 α (Taber, 2018) and were thus removed from the dataset for further analysis.

3.8.3. Brief Religious Cope- Pargament

The Brief R Cope is the short form of the Religious Coping measure by Pargament (2011) (Appendix C, pg. 88). The Religious Coping measure and Brief R Cope measures the type of religious coping employed based either on a positively religious or negatively religious coping strategy. The positive construct reflects 3 ideas of religious coping namely, having a secure relationship with a higher force, having a spiritual connection with others and seeing the world as benevolent (Pargament et al., 2011). Whereas the negative construct reflects a more dismal view of religious coping namely, spiritual tensions and struggles with oneself, others and with the divine force (Pargament et al., 2011). The two dimensions of religious coping in the Brief R COPE measure was produced from a factor analysis of the original R Cope scale (Pargament et al., 2011). The positive religious coping and negative religious coping subscales are made up of 7 items each. Therefore, the questionnaire contained 14 items/ questions.

The psychometric properties of the subscales previously reflected good internal consistency and reliability with Positive Religious Coping at 0.92 α and Negative Religious Coping at 0.81 α (Pargament et al, 2011). This scale measures the items on a 4-point likert-scale. Measuring 1- “not at all” to 4- “to a great extent”. Item examples that measure either positive or negative religious coping are: “Looked for a stronger connection with God” and “Felt punished by God for my lack of devotion”.

The range of scores for each subscale can be from lowest measuring 7 and highest measuring 28. The scores of the items will be scored separately for the positive items and negative items and will be treated as separate in the analysis. This means that each result will have separate scores for each subscale and there are no reverse scoring present. High scores reflect either a greater positive religious coping style or a greater negative religious coping style and will be treated separately in analysis. In this study, Question 12 the word “church” has been replaced by “religious institution” to make it relevant to the Muslim population as done by Khan and Watson in a Pakistani Muslim population (2006).

This scale has been tested previously in a Muslim population with adequate internal consistency and reliability. The most recent being Positive Religious Coping (PRC) 0.91 α and Negative Religious Coping (NRC) 0.68 α (Berzengi, Berzenji, Kadim, Mustafa, Jobson, 2017) and in another study, PRC= 0.75α and NRC= 0.60 α (Khan, Watson, 2006). However, the researcher of this study was unable to identify sources of this scale used in a South African population.

The internal consistency reliability in the current study showed suitable reliability for both subscales positive R cope (0.92 α) and negative R cope (0.88 α) indicating that the items measured each religious cope dimension effectively in this sample population. Also, there were seven items measuring each subscale, higher than the items measuring each subscale in the other instruments used in this study, which reinforced its reliability.

3.8.4. Psychological Wellbeing- Revised

The psychological wellbeing scale developed by Carol Ryff (1989) measures aspects of positive functioning and wellbeing in terms of a fully functional person. Theoretically developed from converged foundational theories of wellbeing and positive functioning, Carol Ryff's conceptualization of psychological wellbeing encompasses 6 dimensions of wellness. These are: self-acceptance; purpose in life; positive relations with others; personal growth; environmental mastery and autonomy which make up the 6 subscales. The scale made up of 20 items structurally analysed and indicated 18 items that meet psychometric criteria, and the 6 subscales were supported by confirmatory analysis (Ryff, Keyes, 1995). This shortened scale that will be used in this study, correlated from .70 to .89 from the original long scale (Ryff, Keyes, 1995) (Appendix C, pg.89-90).

There are 3 items that measure each construct of psychological wellbeing. This scale measures items on a 5-point likert scale. Ranging from 1- "strongly agree" to 5- "strongly disagree". Item examples are: "I am good at managing the responsibilities of daily life" and "People would describe me as a giving person, willing to share my time with others". The range of raw scoring for each subscale would be from lowest measuring 3 to highest measuring 15. Questions 1, 2, 3, 8, 9, 11, 12, 13 and 17 are reversed scored as the items are worded opposite to what the scale is measuring. Each subscale should be calculated separately. Higher scores indicate higher levels of psychological wellbeing (Ryff, Keyes, 1995; Ryff, Almeida, et al., 2010).

Most recent study on psychometric properties of the 18-item psychological wellbeing measure indicated adequate internal consistency reliability (Ostea- Barlutiu; Balas-Baconschi, Hathazi; 2019). The Cronbach alpha in the study ranged from 0.62 α to 0.75α for the 6 dimensions of psychological wellbeing. Cronbach Alpha internal consistency of reliability has found coefficients ranging from 0.83α to 0.91α for the 6 subscales in a South African context (Davidson, 2006).

The internal consistency reliability in this sample produced acceptable alpha scores ranging from 0.83 α (*Total Psychological Well-being*) to 0.61 α (*Environmental Mastery, Personal Growth*) The *Purpose In Life* subscale produced a significantly low internal consistency reliability with a score of 0.11 α and was thus removed from further analysis. This was first double-checked for possible reverse scoring errors but revealed that this subscale was not a good representation or fit in this sample population.

3.9. Procedure

After having the ethical clearance to conduct this study obtained from the Human Research Ethics Committee (HREC non-medical) as seen in Appendix A (pg.81) at the University of Witwatersrand, Johannesburg using the internal ethics process in the Department of Psychology the questionnaire was made available online to be accessed to potential participants. The questionnaire was created online through a survey platform SurveyMonkey. The survey was available through a web-based link where the questionnaire was answered with a user-friendly interface allowing both desktop and mobile phone access. The web-based link included the Participant Information Sheet outlining the purpose of the study and research ethics prior to answering the questionnaire. The link was distributed via social media platforms and during this phase additional participants were reached through organizations such as the Muslim Student Association and Awqaf SA who allowed a larger group of Muslims access to answering the survey. This resulted in just over 500 responses. After data collection, the raw data was entered through MS Excel which was then adjusted for missing scores and reversed scored where necessary. This produced a total of 410 responses that was used for analysis. Analysis was done using SPSS (Version 27, IBM ,2020)

3.10. Ethics

Ethical clearance was obtained for this study from the Human Research Ethics Committee at the University of the Witwatersrand (protocol no. MASPR/20/06). Potential participants were sent an online web-based link to the survey which included the Participant Information Sheet (Appendix B, pg.82-83) containing the ethics of the study and consent to participate. The information sheet outlined the purpose of the study, what the study entails and what will be the participant's contribution to research in psychology. Participants were informed that this study requires answering of a questionnaire and indicating it may take 15-30 minutes to complete the survey. It was noted that their participation is voluntary and that there are no advantages or disadvantages in participating in this study. The participants were informed on how confidentiality will be assured. This was done by assuring the participants that they will not fill in any information that can identify who they are such as their names. This was further emphasised by removing the IP addresses from SurveyMonkey analytics so that the participants will be untraceable. The potential participants were

assured their participation is voluntary and by completing the questionnaire they give consent to allow the data to be analysed and reported in a research report that can further be presented in journal articles. Consent was done by clicking “yes” to agree to participate in this study after having read the ethical information before answering the questions. The participants were assured they can contact the researcher if they wish to view the results of the study. It was stated that the results of the questionnaire are only accessible to the researcher and her supervisor. This meant that the data obtained from this study are to be password protected on a computer that is only accessible to the researcher. It is also noted that the data from the questionnaire will be kept only for the period of this study on a password protected online storage and will be destroyed thereafter. To reduce harm contact details to helplines were presented so that participants may access if the study or otherwise, has left them feeling vulnerable. Researcher’s contact details were made available to the participants and were notified that they are welcome to contact at any point in time to discuss any aspects of the questionnaire or information sheet.

3.11. Data analysis

The data were analysed using the SPSS statistical software (version 26, IBM, 2019). The first input were descriptive statistics to gather the basic features of data such as the frequencies and percentages of nominal data found in the demographic questions. This also included the means, standard deviations, minimum/maximum values of ordinal and interval data of the demographics and each of the scales. The descriptive statistics were used to examine the coping styles and religious coping styles used in our sample as well as describe the psychological wellbeing present in our participants. This was used to answer our first three research questions. The internal consistency reliability of the measures was tested using Cronbach’s Alpha reliability coefficient. The subscales that did not meet a favourable reliability co-efficient were removed from further analysis.

Correlations measures the strength and direction of the linear relationship between two variables. The correlation coefficient denoted by *r* suggests the degree to which the variables relate to each other, i.e., positively, or negatively (Privitera, 2017). Pearson’s correlation co-efficient was used with measures that met the assumptions. These assumptions are, identifying normal distribution of the data, homoscedacity of the variables, linearity of data, paired observations of items and no outliers (Privitera, 2017). The correlation statistic assumptions of normality, linearity and outliers were violated for the substance use subscale and was thus removed from testing. The results of correlation helped distinguish a relationship between coping styles and religious coping; coping styles and psychological wellbeing and religious coping and psychological wellbeing to answer research questions 4 and 5.

In answering the final research question, a multiple regression analysis was used. Multiple linear regression assumptions need to be met in order to conduct the test, these assumptions are there is little multicollinearity, a linear relationship, and homoscedasticity of the variables (Privitera, 2017). This regression test was used to determine whether coping predicts psychological wellbeing among our sample of Muslims during COVID-19. Coping styles, religious coping as well as key demographic variables namely, gender, level of religiosity, COVID-risk, number of people in household, physical health and mental health were used as predictors in the regression test. These were tested against each psychological wellbeing domains namely, autonomy, environmental mastery, positive relations with others, self-acceptance, personal growth and total psychological wellbeing representing the criterion variables. To achieve significant predictors in each psychological wellbeing model, a backward stepwise regression test was used. A backward stepwise regression statistic goes through several regression models to come to a final significant model (Smith, 2018). This is done by eliminating non-significant predictors in the first model, then testing a second regression in the next model which automatically eliminates non-significant predictors and repeating this process until a final model is presented with only significant results. The results of the data analysis are found in the following chapter under the heading: Results.

3.12. Conclusion

This chapter focused on the methods used to carry out the research. The hypotheses, research design, sampling and procedure were highlighted. In addition, the descriptive information on the sample were presented in the form of frequencies, percentages and means, maximum, minimum and standard deviation values. The instruments were tested for their internal consistency reliability which were presented in the alpha coefficient values. The subscales that did not meet the required level of internal consistency were removed. The data was analyzed using SPSS statistical software (version 26, IBM, 2019) and the results will be discussed in the following chapter.

Chapter Four: Results

4.1. Introduction

The results that were obtained from analysis are presented in this chapter to answer the study's research questions as presented in chapter 3. The results for question 1, 2 and 3 that uncovers the coping strategies used in our sample, whether religious coping was used by our sample and the psychological well-being present in our sample are presented first in this chapter. The analyses for these three questions include descriptive statistics for coping styles, religious coping, and psychological well-being. This is followed by a correlation statistic to determine a relationship between coping styles and psychological well-being and religious coping and psychological well-being in answering research question 4 and 5, respectively. Lastly, research question 6 focused on which coping styles predict psychological well-being, was investigated using multiple linear regression analysis.

4.2. What coping strategies are used by SA Muslims during the COVID-19 lockdown?

As indicated in Table 4.1, *Turning to religion* and *Acceptance* were the most common coping strategies used in this sample with means of 6.45 (SD = 1.53) and 6.32 (SD = 1.45), respectively. All coping styles were normally distributed except *Substance use* with a skewness of 4.9.

Table 4.1 *Descriptive statistic for coping strategies*

VARIABLE	N	Min	Max	Mean	SD	Skewness	Alpha scores
Active coping	409	2	8	5.00	1.588	.081	.61 α
Planning	409	2	8	4.99	1.680	.006	.69 α
Positive reframing	409	2	8	5.30	1.664	-.109	.68 α
Acceptance	409	2	8	6.32	1.452	-.590	.63 α
Humour	409	2	8	3.78	1.683	.780	.85 α
Turning to Religion	409	2	8	6.45	1.529	-.724	.80 α
Emotional support	409	2	8	4.23	1.737	.484	.76 α
Instrumental support	409	2	8	4.03	1.650	.502	.79 α
Denial	409	2	8	2.97	1.354	1.498	.66 α
Substance use	409	2	8	2.16	.697	4.893	.84 α

Behavioural disengagement	409	2	8	2.87	1.224	1.714	.64 α
Self-blame	409	2	8	3.05	1.465	1.709	.72 α

4.3. Do South African Muslims use religious coping during the COVID-19 lockdown?

To answer this question, the *Turning to Religion* subscale in the Brief COPE scale was added to the Brief Religious Cope descriptive statistic to answer this research question. As seen in Table 4.2 it is evident that South African Muslims do make use of religious coping during the COVID-19 lockdown. The *Turning to Religion* subscale from the Brief COPE indicated an average of 6.45 (SD = 1.529) from a minimum of 2 and maximum of 8 suggesting that this coping style was rated high in this sample. Also, the *Positive Religious Cope* subscale suggested that most participants made use of positive religious coping strategies, indicative by a mean of 30 (SD = 5.28) with a minimum value of 7 and maximum of 30. This sample did not make use of negative religious coping strategies as evidenced with a low mean score of 12.28 (SD=5.49).

Table 4.2 *Descriptive statistic for religious coping*

Variable	**N**	**Min**	**Max**	**Mean**	**SD**	**Skewness**	**Alpha scores**
Turning to Religion	409	2	8	6.45	1.529	-.724	.80 α
Positive R Cope	409	7	35	30.05	5.278	-1.961	.92 α
Negative R Cope	409	7	35	12.28	5.493	1.093	.88 α

4.4. How can the psychological wellbeing of SA Muslims during the COVID-19 lockdown be described?

As seen in Table 4.3, *Psychological Wellbeing* has a mean of 45.3 (SD=7.21), indicating higher than average wellbeing was present in this sample. The *Self-acceptance* domain of psychological well-being has the highest mean in this sample, with a mean of 11 (SD = 2.42). This is followed by *Environmental Mastery* with a mean of 10.52 (SD = 2.27), *Personal Growth* (M=8.71, SD=1.32) and *Autonomy* (M=8.14, SD=1.52). *Positive relations with others* has the lowest mean of all the wellbeing scales with a mean of 6.71 (SD = 2.14).

Table 4.3 *Descriptive statistic for psychological well-being*

Variables	**N**	**Min**	**Max**	**Mean**	**SD**	**Skewness**	**Alpha scores**

Autonomy	409	3	15	8.14	1.523	-.752	.71 α
Environmental mastery	409	3	15	10.52	2.273	-.389	.61 α
Personal growth	409	3	15	8.71	1.319	-1.240	.61 α
Positive relations with others	409	3	15	6.91	2.138	-.428	.67 α
Self-acceptance	409	3	15	11.01	2.418	-.697	.63 α
Total PWB	409	15	60	45.30	7.210	-.644	.83 α

4.5. Does a relationship exist between the coping strategies and psychological wellbeing of Muslims during the COVID-19 lockdown?

To answer this question the correlation statistic was used to determine significant relationships between coping strategies and psychological well-being domains. As evident in Table 4.4 the functional emotion-focused coping styles, *acceptance* and *positive reframing* showed significant positive relationship to all psychological wellbeing domains. *Acceptance* produced stronger positive relationships to all psychological well-being domains and *Total psychological well-being* than the *positive reframing* coping style. This is evidenced by *Total psychological well-being* (r=.24, p<0.01) for *Acceptance* coping and r=.181, p<0.01 for *Positive reframing* coping. Acceptance and positive reframing were positively correlated to *Autonomy* (r=.188, p<0.01; r=.16, p<0.01), *Environmental mastery* (r=.207, p<0.01; r=.120, p<0.01), *Personal growth* (r=.239, p<0.01; r=.202, p<0.01), *Positive relations with others* (r=.166, p<0.01; r=.112, p<0.01), and *Self-acceptance* (r=.194, p<0.01; r=.116, p<0.01). In contrast, *denial*, *behavioural disengagement,* and *self-blame* coping styles were negatively associated with all psychological well-being domains, including *Total psychological wellbeing*. *Self-blame* coping produced the strongest negative association with psychological well-being. This is evidenced with *Autonomy* (r=-.277, p<0.01), *Environmental mastery* (r=-.48, p<0.01), *Personal growth* (r=-.235, p<0.01), *Positive relations with others* (r=-.348, p<0.01), *Self-acceptance* (r=-.463, p<0.01) and *Total psychological wellbeing* (r=-.511, p<0.01). *Behavioural disengagement* coping was negatively associated with *Autonomy* (r=-.202, p<0.01), *Environmental mastery* (r=-.380, p<0.01), *Personal growth* (r=-.274, p<0.01), *Positive relations with others* (r=-.335, p<0.01), *Self-acceptance* (r=-.387, p<0.01) and *Total psychological wellbeing* (r=-.442, p<0.01). *Denial* coping negative associations are evidenced by *Autonomy* (r=-.105, p<0.05), *Environmental mastery* (r=-.162, p<0.01), *Personal growth* (r=-.146, p<0.01), *Positive relations with others* (r=-.125, p<0.05), *Self-acceptance* (r=-.209, p<0.01) and *Total psychological wellbeing* (r=-.207, p<0.01). *Active coping* was positively associated with all domains except *Environmental mastery* and *Self-acceptance*. These associations were *Autonomy* (r=.160, p<0.01), *Personal growth* (r=.217, p<0.01), *Positive relations*

with others (*r*=.128, p<0.01) and *Total psychological wellbeing* (*r*=.129, p<0.01). *Seeking emotional support* coping style was positively correlated to *Personal growth* (*r*=.105, p<0.05) and *Positive relations with others* (*r*=.162, p<0.01). *Seeking instrumental support* coping was positively correlated to *Environmental mastery* (*r*=.106, p<0.05) and *Positive relations with others* (*r*.102, p<0.05). The *planning* and *humour* coping styles were not significantly related to any psychological well-being domains in this sample. The *Turning to religion* coping style will be discussed in the next research question.

4.6. Does a relationship exist between religious coping and psychological wellbeing of Muslims during the COVID-19 lockdown?

Turning to Religion was positively correlated to *Environmental mastery* (*r*= .130, p<0.01), *Positive growth* (*r* = .126, p<0.05), *Positive relations with others* (*r* =.182, p<0.01), *Self-acceptance* (*r* =.159, p<0.01), and *Total psychological well-being* (*r* =.182, p<0.01). Using a non-parametric correlation statistic (Spearman's Rank-Order Correlation) as seen in Table 4.5 below indicates that *Negative Religious Cope* produced significant negative relationships with all psychological domains and *Total psychological well-being* in this sample. This means that as individuals who greatly view events from an insecure religious point of view would likely experience lower psychological well-being. *Negative R Cope* produced the strongest negative relationship to *Total psychological well-being* (r=-.312, p<0.01), followed by *Self-acceptance* (r=-.285, p<0.01), *Positive relations with others* (r=-.266, p<0.01), *Environmental mastery* (*r* = -215, p<0.01), *Personal growth* (*r*= -.210, p<0.01) and *Autonomy* (*r*= -.190, p<0.01). *Positive Religious Coping* was positively correlated to just one psychological wellbeing domain, *Personal growth* (*r*= .127, p<0.01).

Table 4.5 *Correlation statistic measuring the relationship between religious coping and psychological well-being*

	Positive R Cope	Negative R Cope	Religion
Autonomy	.040	-.190**	.050
Environmental	-.003	-.215**	.130**
*Personal Growth	.127**	-.210**	.126*
Positive relations with others	.025	-.266**	.182**
Self-acceptance	.045	-.285**	.159**
Total PWB	.053	-.312**	.182**

*non-parametric correlation statistic
**correlation is significant at 0.01 level

Table 4.4. *Correlation statistic measuring the relationship between coping and psychological well-being*

	Active	Planning	Positive reframe	Acceptance	Humour	Religion	Emotional	Instrumental	Denial	Behavioural disengagement	Self-blame
Autonomy	.160**	.074	.160**	.188**	.008	.050	-.042	-.078	-.105*	-.202**	-.277**
Environmental mastery	.038	-.027	.120*	.207**	.048	.130**	-.036	-.106*	-.162**	-.380**	-.480**
Personal growth	.217**	.081	.202**	.239**	.068	.126*	.105*	.085	-.146**	-.274**	-.235**
Positive relations with others	.128**	.058	.112*	.166**	.029	.182**	.162**	.102*	-.125*	-.335**	-.348**
Self-acceptance	.017	-.032	.116*	.194**	.051	.159**	.058	-.023	-.209**	-.387**	-.463**
Total PWB	.129**	.028	.181**	.263**	0.055	.182**	.066	-.012	-.207**	-.442**	-.511**

* significant correlation at p<0.05

** significant correlation at p<0.0

4.7 Do coping strategies predict psychological wellbeing among South African Muslims during the COVID-19 lockdown?

4.7.1. Introduction

Each psychological well-being subscale are separated into their own research question for ease of interpreting the regression statistic. These are: *Autonomy*, *Environmental mastery*, *Personal growth*, *Positive relations with others*, *Self-acceptance*, and *Total psychological well-being*. A multiple regression statistic was used to answer research question 6. A backward stepwise multiple regression was employed to come to a final, overall model with significant predictors. The backward stepwise multiple regression has the same underlying assumptions of a multiple regression statistic. These include normality (residuals of models are normally distributed), a linear relationship between the criterion variables and predictor variables, multicollinearity using the Variance Inflation Factor (VIF) and homoscedacity (the residuals are equal across regression line) (Privitera, 2017). The final model is produced by eliminating non-significant predictors in each step of the backward, stepwise regression statistic, reaching the final step with only significant predictors (Smith, 2018). The final model is presented in this study for each psychological well-being domain. The predictor variables used in each regression statistic were the Brief Cope subscales which includes, *Active coping*, *Planning*, *Positive reframing*, *Acceptance*, *Emotional support*, *Instrumental support*, *Turning to religion*, *Humour*, *Denial*, *Substance use*, *Behavioural disengagement*, and *Self-blame*. The Brief Religious Cope made up of *Positive Religious Coping* and *Negative Religious Coping* were included as predictors. Demographic variables such as gender, level of religiosity, COVID-risk, number of people in household, physical health, and mental health were included as predictor variables.

4.7.2. Do coping styles predict autonomy?

The overall model to test this criterion was significant ($F= 12.12$, $p= .000$, $r^2=.16$). This model only accounted for 16% of the variation in *Autonomy*. As the backward step wise regression statistic derives only significant predictors, all items in the model are significant. In this model the problem-solving coping styles, *Active coping* ($\beta= 0.15$, $t=3,04$, $p<0.01$) and *Positive reframing* ($\beta=0.1$, $t=2,02$, $p<0.05$) were predictors of autonomy as seen in Table 4.6. The functional emotion-focused coping represented by *Emotional support* ($\beta= -0.1$, $t=-2,22$, $p<0.05$) was a negative predictor of autonomy. In addition, the less than functional coping style, *Self-blame* ($\beta=-0.16$, $t=-2,89$, $p<0.01$) was also a negative predictor to autonomy. Demographic variables particularly number of people in household ($\beta= -0.21$, $t=-1,99$,

p<0.05) showed to be a negative predictor to autonomy and mental health (β=0.08, t=3,44, p=0,001) showed to be a positive predictor.

From Table 4.6, mental health and *Active coping* showed the highest predicting power to autonomy in this sample, respectively. This suggests that individuals who rate a higher level of mental health would likely experience a greater sense of independence and be less likely to fall into societal pressures. On the other hand, *self-blame* produced the strongest negative predictor to autonomy in this sample with an effect size of -0.15, indicating that individuals who blame themselves would likely feel more concerned by others' opinions and likely depend on what others think.

Table 4.6 *Backward step wise multiple regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting autonomy*

		Unstandardized coefficients		**Standardized coefficients**		
Model		**B**	**Standard error**	**Beta**	**T**	**Sig.**
	(Constant)	7,164	0,600		11,934	0,000
	Active coping	0,157	0,052	0,163	3,035	0,003
	Positive reframing	0,100	0,050	0,109	2,015	0,045
	Emotional support	-0,100	0,045	-0,114	-2,221	0,027
	Self-blame	-0,163	0,057	-0,158	-2,887	0,004
	Number in people in household	-0,214	0,108	-0,093	-1,990	0,047
	Mental health	0,087	0,025	0,187	3,439	0,001

4.7.3. Do coping styles predict environmental mastery?

The overall model to test this criterion was significant (F= 33.1, p= .000, r^2=.36). This model accounted for 36% of the variation in *Environmental mastery*. From Table 4.7 is it illustrated that the problem-solving coping style, *positive reframing* (β=0.14, t= 2,47, p<0.05) was a positive predictor to environmental mastery. The less than functional coping style, *self-blame* (β=-0.43, t=-5,92, p<0.001) was

a negative predictor to environmental mastery. *Positive religious coping* was also a negative predictor (β=-0.04, t=-2,20, p<0.05) to environmental mastery. The demographic variable representing level of religiosity (β=0.25, t=2,13, p<0.05) showed to be a positive predictor. Number of people in household (β=-0.54, t=-3,84, p<0.001) indicated to be a negative predictor to environmental mastery. Physical health was a negative predictor (β=-0.09, t=-2,37, p<0.05) and mental health a positive predictor (β=0.27, t=7,54, p<0.001).

From the model it is ascertained that *mental health* showed the strongest predictor power to environmental mastery in this sample. This suggests that individuals who experience greater mental health would more likely be able to manage their surroundings and create environments that promote positivity. *Self-blame* showed the strongest negative predicting ability to environmental mastery with an effect size of -0.27, indicating that individuals who blame themselves for circumstances they are in would less likely be able to manage their surroundings.

Table 4.7 *Backward step wise multiple regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting environmental mastery*

Model		Unstandardized coefficients		Standardized coefficients		
		B	**Standard error**	**Beta**	**T**	**Sig.**
	(Constant)	10,576	1,029		10,276	0,000
	Positive reframing	0,140	0,057	0,102	2,466	0,014
	Self-blame	-0,433	0,073	-0,279	-5,924	0,000
	Positive Religious Cope	-0,041	0,019	-0,094	-2,200	0,028
	Level of religiosity	0,255	0,120	0,089	2,128	0,034
	Number of people in household	-0,540	0,141	-0,156	-3,837	0,000
	Physical health	-0,090	0,038	-0,111	-2,368	0,018
	Mental health	0,277	0,037	0,398	7,539	0,000

4.7.4. Do coping styles predict personal growth?

The overall model to test this criterion was significant (F=14.2 p=.000, r^2=.16). This model accounted for only 16% of the variation in *personal growth*.

The model represented in Table 4.8 indicated that *active coping* (β=0.15, t=3,75, p<0.001), *acceptance* (β=0.11, t=2,47, p<0.05), COVID-risk (β=0.29, t=2,14, p<0.05) and mental health (β=0.09, t=3,73, p<0.001) shown to be significant, positive predictors to personal growth. *Behavioural disengagement* (β=-0.2, t=-3,55, p<0.001) and physical health (β=-0.05, t=-2,07, p<0.05) were represented as negative predictors to personal growth.

Active coping showing the highest effect size (0.18) is the strongest predictor in this sample. This suggests that individuals who make an active attempt to reduce their stress would likely look for more opportunities to develop and feel as though they are fulfilling their potential. *Behavioural disengagement* showed the greatest negative predicting power in this sample with an effect size of -0.19. This indicates that an individual who gives up trying to deal with their stressor would likely show a lack of interest and feel incapable of developing new skills.

Table 4.8 *Backward step wise multiple regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting personal growth*

Model		**Unstandardized coefficients**		**Standardized coefficients**		
		B	**Standard error**	**Beta**	**T**	**Sig.**
	(Constant)	6,902	0,602		11,465	0,000
	Active Coping	0,152	0,041	0,183	3,749	0,000
	Acceptance	0,111	0,045	0,122	2,467	0,014
	Behavioural disengagement	-0,204	0,057	-0,187	-3,552	0,000
	Covid-risk	0,295	0,138	0,100	2,144	0,033
	Physical health	-0,051	0,025	-0,110	-2,068	0,039
	Mental health	0,090	0,024	0,224	3,726	0,000

4.7.5. Do coping styles predict positive relations with others?

The overall model to test this criterion was significant (F= 29.7, p=.000, r^2=.3). This model accounted for 30% of the variation in *personal relations with others*.

As indicated in Table 4.9 *emotional support* (β=0.26, t=4,88, p<0.001), level of religiosity (β=0.39, t=3,27, p<0.01) and mental health (β= 0.21, t=6,51, p<0.001) were significant positive predictors to the psychological domain, positive relations with others in this sample. *Self-blame* (β=-0.2, t=-2,75, p<0.01), *positive religious cope* (β=-0.05, t=-2,73, p<0.01) and *negative religious cope* (β=-0.07, t=-3,71, p<0.001) indicated a negative predicting ability to positive relations with others.

Mental health and *emotional support* with effect sizes of 0.3 and 0.2, respectively indicate that they have the highest positive predicting power in this sample. This indicates that individuals who rate higher mental wellness would be more likely be empathetic and have warm trusting relationships with others. Similarly, individuals who seek out emotional support or advice from others are likely to experience the same. In contrast, *negative religious coping* showed the strongest negative predicting power in this sample with an effect size of -0.17. This suggests that individuals who view their circumstances from an insecure religious viewpoint were more likely to experience isolation or have few trusting relationships with others.

Table 4.9 *Backward step wise multiple regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting positive relations with others*

Model		Unstandardized coefficients		Standardized coefficients		
		B	**Standard error**	**Beta**	**T**	**Sig.**
	(Constant)	4,444	0,885		5,022	0,000
	Emotional support	0,256	0,052	0,209	4,876	0,000
	Self-blame	-0,200	0,073	-0,138	-2,753	0,006
	Positive Religious Cope	-0,049	0,018	-0,120	-2,727	0,007
	Negative Religious Cope	-0,065	0,018	-0,168	-3,708	0,000
	Level of religiosity	0,389	0,119	0,145	3,274	0,001
	Mental health	0,212	0,033	0,326	6,505	0,000

4.7.6. Do coping styles predict self-acceptance?

The overall model to test this criterion was significant (F=44.5 p=.000 r^2=.35). This model accounted for 35% of the variation in *self-acceptance*.

Table 4.10 tells us that *emotional support* (β=0.13, t=2,38, p<0.05) and mental health (β=0.23, t=6,31, p<0.001) have positive predicting qualities to self-acceptance. *Behavioural disengagement* (β=-0.2, t=-2,07, p<0.05), *self-blame* (β=-0.36, t=-4,36, p<0.001) and *negative religious cope* (β=-0.06, t=-3,12, p<0.01) have negative predicting in this sample. Mental health is evidenced to be the strongest predictor to self-acceptance in this sample with an effect size of 0.3. This tells us that individuals who rate a higher level of mental health would be more likely to have positive attitudes and accept their flaws. *Self-blame* showed the strongest negative predicting ability to self-acceptance in this sample with an effect size of -0.2, suggesting that individuals who tend to blame themselves would likely feel unsatisfied with themselves.

Table 4.10 *Backward step wise multiple regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting self-acceptance*

Model		Unstandardized coefficients		Standardized coefficients		
		B	Standard error	Beta	T	Sig.
	(Constant)	9,746	0,777		12,542	0,000
	Emotional support	0,133	0,056	0,097	2,375	0,018
	Behavioural disengagement	-0,204	0,098	-0,103	-2,069	0,039
	Self-blame	-0,358	0,082	-0,220	-4,355	0,000
	Negative Religious Cope	-0,062	0,019	-0,141	-3,198	0,001
	Mental health	0,230	0,036	0,315	6,306	0,000

4.7.7. Do coping styles predict total psychological well-being?

The overall model to test this criterion was significant (F=32.9, p=.000, r^2=.47). This model accounted for 47% of the variation in *total psychological well-being*.

Total psychological well-being is a total scoring of all the domains of psychological well-being which produces an encompassing and holistic psychological well-being construct. From Table 4.11 we can see that *active coping* (β=0.4, t=2,57, p<0.05), *emotional support* (β=0.3, t=2,10, p<0.05), level of religiosity (β=0.68, t=2,02, p<0.05) and mental health (β=0.7, t=7,48, p<0.001) produced positive predicting ability to total psychological well-being. *Behavioural disengagement* (β=-0.78, t=-2,88, p<0.01), *self-blame* (β=-1.1, t=-4,90, p<0.001), *negative religious coping* (β=-0.18, t=-3,37, p<0.01) and number of people in household (B=-1.3, t=-3,26, p<0.01) showed a negative predicting relationship to total psychological well-being.

Mental health is evidenced to have the greatest positive predicting power in this sample with an effect size of 0.34. This indicates that an individual who rates a higher level of mental wellness would more likely experience a greater sense of psychological well-being. This means that higher rated mental health would likely experience more engagement, meaning and self-realization (Keyes, 2002; Huppert, 2005; Wells, 2010).

Table 4.11 *Backward step wise multiple linear regression measuring the role of coping scales, physical health, mental health, marital status, number of people in household in predicting total psychological well-being*

Model		**Unstandardized coefficients**		**Standardized coefficients**		
		B	**Standard error**	**Beta**	**T**	**Sig.**
	(Constant)	40,389	2,869		14,076	0,000
	Active cope	0,463	0,180	0,102	2,573	0,010
	Emotional support	0,346	0,165	0,084	2,099	0,036
	Behavioural disengagement	-0,779	0,271	-0,131	-2,875	0,004
	Self-blame	-1,106	0,226	-0,226	-4,896	0,000
	Negative Religious Cope	-0,181	0,054	-0,138	-3,372	0,001
	Level of religiosity	0,685	0,339	0,076	2,022	0,044
	Number of people in household	-1,322	0,405	-0,121	-3,264	0,001
	Mental health	0,750	0,100	0,342	7,484	0,000

4.8. Conclusion

This chapter presented the results from statistical analyses that were used to help answer the study's research questions. These included descriptive statistics to uncover the coping styles used by this sample, if religious coping styles are present in this sample as well as to describe the psychological well-being of this sample. The results indicated that *turning to religion* and *acceptance* were the most common coping style used during the Covid-19 lockdown. Religion was a common coping style and majority of the sample rated *Positive Religious Coping* high as a coping strategy. Psychological well-being was found to fall above a neutral range in this sample. *Self-acceptance* was most evident in this sample followed by *Environmental mastery*.

Correlations were used to explore the relationships between coping styles and psychological well-being. The emotion-focused coping strategy, *acceptance* which represents an acceptance to the events that have occurred, was positively related to all psychological well-being domains among this sample. *Active coping, positive reframing, religious coping and emotional support* were also found to be positively related to a number of psychological well-being domains. However, the less than functional coping strategies, *self-blame* and *behavioural disengagement* were shown to be negatively related to all psychological well-being domains. The less than functional emotion-focused strategy, *denial* was also found to be negatively related to some psychological well-being domains. A further correlation was done to determine a relationship between religious coping styles and psychological well-being. It was found that the *negative religious coping* indicated a significant negative relationship to psychological well-being.

To answer the final question in determining if coping styles predict psychological well-being in this sample, a backward stepwise multiple regression analyses was conducted. These results demonstrated that *mental health* showed the most predicting power to several psychological well-being domains, such as *autonomy, environmental mastery, positive relations with others, self-acceptance and total psychological well-being*. The problem-focused coping style, *active coping* was found to be strongly predicted in *autonomy* and *personal growth*. While the emotion-focused coping style, *emotional support* was found to be strongly predicted in *positive relations with others* and *self-acceptance*. These results will be further discussed in the next chapter.

Chapter Five: Discussion

5.1. Introduction

Coping and religious coping plays a role in psychological wellbeing (Krok, 2014; Kaliampos, Roussi, 2015; Mayordomo et al., 2016; Brewster et al., 2016; Akhtar, Park et al., 2018; Lee, Tzeng, Chiang, 2019). It was hypothesised this study would produce similar findings and confirm a relationship in a sample of Muslims in South Africa. The broad aim of this study was to uncover the relationship between coping and psychological well-being among South African Muslims during the COVID-19 pandemic. To determine this relationship correlation and regression analyses were conducted. The findings were reported in the previous chapter. This chapter will discuss and elaborate on the significant findings of this study in relation to past research. The discussion is separated into 4 parts which firstly examines the coping styles used in this study together with the psychological well-being of our sample. The next part elaborates on the linear relationships between coping and psychological wellbeing in our sample. Thereafter, the linear relationship between religious coping and psychological wellbeing are discussed. Finally, the factors that predict psychological wellbeing in our sample is presented and discussed. Lastly, limitations to this study, together with recommendations for future research are explored.

5.2 Coping styles and psychological wellbeing in this sample.

The use of active coping strategies and acceptance were the most used coping methods during the mandatory lockdown in the United States (Park et al., 2020). Similarly, the results from our study indicate that religion and acceptance were the highest rated coping strategy used in this sample. To put this into perspective, religion and acceptance were a common theme in situation of loss and bereavement in a Muslim population (Rubin, Yasien-Esmael, 2004). Overcoming the grief process ensures a quicker way to functionality, and by using religious acceptance illustrated as “God’s Will” individuals would ease quicker into daily functioning and reduce any morbidity that may be associated with a prolonged grief period (Rubin, Yasien-Esmael, 2004). The acceptance motif in Islam is intimately tied to the Islamic tradition of *Qadr*, meaning “God’s Will”, indicating that for Muslims the pandemic is a result of a divine cause and accepting the circumstances surrounding the pandemic is a means to accept it as God’s will.

In relation to acceptance as a coping strategy, it was found in health-related contexts, among those suffering with chronic pain (McCracken, Eccleston, 2003) and among parents with ailing children (Silva et al., 2015). In terms of pain-related contexts, the repertoire of acceptance coping is structured to allow

feelings and thoughts to be present without engaging or changing them and is more of a mental exercise than simply a belief or decision to accept an event or circumstances (McCracken, Eccleston, 2003). However, in varying contexts, it can be used to provide a sense of control over one's emotional reactions to a stressful event (Silva, et al., 2015). According to Carver (1989), acceptance is a coping response whereby an individual would accept the reality of a situation and be active in trying to overcome the stressor therefore considered functional. Carver (1989) has said, "One might expect acceptance to be particularly important in circumstances in which the stressor is something that must be accommodated to, as opposed to circumstances in which the stressor can easily be changed." Considering the nature of the COVID-19 pandemic and the lack of personal control over the circumstances surrounding the virus, acceptance can provide a strategy in which to cognitively accommodate to the stressors associated with it, thereby minimizing the psychological load as a result of the pandemic. Also, the variability of situations in which these coping strategies are found indicate the situational conditions which can impact coping strategies used. This corroborates the position of Lazarus coping theory whereby the appraisal of the situation is considered a predictor of the coping responses used (Lazarus, Folkman, 1984).

Religious coping was rated high in our sample, indicating that most participants made use of religion as a means to cope with COVID-19 related stress. This can be emphasised by the fact that Muslims turn to religion as a form of comfort in times of distress and are inclined towards the efficacy of religious coping (Lowenthal, Ginnirella, Evdoka, Murphy, 2001). During COVID-19, Muslims made use of religious coping more than other religious denomination, with a mean of 18.78 (SD=6.92) compared to a Christian sample mean of 11.66 (SD=5.58) (Thomas, Barbato, 2020). Muslims may engage in rituals such as *salaah* (prayer), *dhikr* (meditation) or *dua* (supplication) as a means of coping (Adam, Ward, 2015). Religious practices which are primary elements in the lives of Muslims plays a role in contributing to wellbeing (Abu-Raiya, 2009). Level of religiosity has also been suggested to be an indicator for religious coping (Thomas, Barbato, 2020).

Religious coping is categorized as a problem-solving or emotion focused coping strategy that has positive outcomes and has been iterated as an individualistic expression of how one would turn to religion in times of stress (Kra¨geloh et al., 2012). Religion as a coping resource in context of the Brief COPE scale can be interpreted as a means of positive reframing, emotional support and even a means of actively coping with the stressor thus possessing both problem-solving and emotion-focused attributes (Carver, 1989). Indicating that, *turning to religion* may include any means of religious practice,

experience or thoughts to be used as a coping style. This relates to Pargament's views on religious coping, wherein religious beliefs and practices form part of one's coping method which helps to bring one's religious orientation back to equilibrium following a highly stressful experience (Pargament, 1997; Pargament, 1998). In addition, it plays a role in the individual's acceptance, acknowledgement of loss, letting go and moving on, and is considered to be an active coping strategy rather than a passive one. (Park, Folkman, 1997; Pargament, Park, 2005).

5.3 Psychological wellbeing of Muslim South Africans during COVID

Psychological wellbeing in our sample fell above average, suggesting high psychological well-being with the self-acceptance domain most evident in our sample. A sample of multinational Muslims rated their well-being moderately in a study measuring subjective wellbeing in terms of life satisfaction (Abu Raiya et al., 2018). Subjective well-being differs from psychological wellbeing in that it is a measure of a current state of wellness. Psychological wellbeing, however, is relatively constant in one's life and is usually influenced by past experiences and may be impact by amplified stressors or traumatic events (Godinic, Obrenovic, Khudaykulov, 2020). Due to the stressful consequences of COVID-19 it is expected that individuals may experience differential states of wellness, however with the appropriate coping strategy it is anticipated that psychological wellbeing can be maintained during this time.

Self-acceptance was most evident psychological wellbeing domain in our sample, and in a past study has found to be is related to aspects of self-kindness, common humanity as well as mindfulness, and negatively associated with isolation (Sun, Chan, Chan, 2016). With increased social distancing measures and the quarantine effects of mental health (Jiménez et al., 2020), it is noted that the circumstances surrounding the COVID-19 pandemic can affect overall wellness, however effective coping strategies can aid in maintaining positive psychological functioning. To understand the relationship between coping and psychological well-being in our sample is discussed next.

5.4 Relationships between coping styles and psychological wellbeing

Most recent studies that investigated the relationship between coping and wellbeing in a Muslim sample were focused on the subjective state of wellbeing, such as life satisfaction, hopefulness and feeling good about oneself (Adam, Ward, 2015; Abu-Raiya et al., 2019; Abu-Raiya et al., 2020; Abbas et al., 2020). Subjective wellbeing is concerned with a more current state of wellbeing such as happiness, whereas psychological wellbeing as seen in our study is focused on long-term psychological functioning that is centred around growth and meaningfulness (Disabato, et al., 2016; White, Eyber, 2017).

In our sample, *acceptance* coping strategy showed significant positive relationships to all psychological wellbeing domains. Acceptance also positively predicted *personal growth*. This illustrates that individuals who experience a higher level of acceptance towards an event would likely experience a higher level of overall psychological well-being. Acceptance was one of the highest coping strategies used during the COVID-19 lockdown (Park et al., 2020). Adaptive coping which includes the acceptance coping strategy was found to be significantly correlated to total psychological wellbeing ($r=0.62$, $p<0.01$) in a sample of those suffering with severe mental illness (Meyer, 2001). Acceptance is associated with engaging with positive activities, life satisfaction and better adjustment (McCracken, Eccleston, 2003). In a health-related context, acceptance is a predictor of adaptive or dysfunctional coping among those suffering with chronic pain (McCracken, Eccleston, 2003). Acceptance is strongly correlated to and predicts *personal growth* in our study, suggesting that individuals with stronger acceptance would likely look for more opportunities to develop and fulfil their potential. According to a study on sexual assault survivors, acceptance coping significantly predicted perceived growth. Highlighting the role of acceptance in positive psychological adjustment following a traumatic and stressful event (Cole, Lynne, 2010). COVID-19 presents circumstances beyond our control, by accepting the events surrounding the pandemic one can protect their mental wellbeing and allow for better adjustment.

Positive reframing produced positive associations with all psychological wellbeing domains and total psychological wellbeing in our sample. In a study by Zacher and Rudolph (2020) positive reframing was found to be related to life satisfaction during the early stages of COVID-19, supporting this study. These results suggest that individuals who are able to manage their emotions associated with COVID-19 experienced a greater level of independence and look for opportunities to develop. Positive reframing is an emotive based coping response and is defined as the ability to manage the emotions associated with the stressor, this involves readjusting how one views the situation (Carver, 1989). It differs from others as it does not involve an action process of reducing the stressor, it instead focuses on overcoming the emotions related to the stressor which then becomes an enabling strategy by aiding in the active and problem-solving processes (Carver, 1989).

While active coping is aligned to problem-solving coping it entails a process of taking action to reduce the source of the stressor or at least ameliorate its effects (Carver, 1989). In this study active coping was correlated to autonomy, personal growth, and positive relations with others. Active coping was also found to predict autonomy, personal growth, and total psychological wellbeing. According to the American Psychological Association (APA) active coping is associated with less mood disturbance and

self-efficacy (APA, 2020). It is as an adaptive process which involves recognizing internal strengths and responsibility in changing one's habits and managing the stressor through set behaviours (APA,2020). Indicating that individuals who actively look for ways to overcome the stressors associated with COVID-19 will likely experience more independence, have good relations with others and experience a sense of personal fulfillment and growth. Autonomy is the ability to pursue one's own wishes and make decisions based on one's own values and not based on the views of others. Higher autonomy indicates an individual will feel independent and would not fall easily to social pressure. (Ryff, Keyes, 1995; Hidalgo et al., 2010). These results indicate that individuals make use of active coping strategies will likely show more independence and be able to make decisions on their own. As previously stated, active coping is the ability to take action in order to reduce the stressor, it is also linked to responsibility and having self-awareness (Carver, 1989). To illustrate the role of active coping on wellbeing during COVID-19, a study during the early stages of the COVID-19 pandemic produced a significant relationship between active coping and life satisfaction during this time (Zacher, Rudolph, 2020). The presence of both active coping and positive reframing indicates that both coping strategies are significant in the contribution to wellbeing in our sample.

Emotional support coping was positively related to positive relations with others. This result indicates that individuals who looked towards others for emotional support and/or comfort during this time would likely have close and trusting relationships with others. Emotional support was positively related to emotional wellbeing in sample of cancer patients (Gonzales et al., 2016). This is reiterated in another cancer study wherein emotional support was correlated to better mood and quality of life (Nipp et al., 2016). This indicates that seeking emotional support from others effectively contributes to wellbeing. It is noted that these individuals would also possess empathy, have warm and trusting relationships, and derive pleasure from the people around them. Due to COVID-19, lifestyle changes such as limited social interaction and not being at work can result in feelings of isolation which can exacerbate anxiety and depressive symptoms (WHO, 2020). Having emotional support can therefore add to overall psychological wellbeing and reduce the risk of anxious and depressive feelings. In light of this, emotional support also predicts many areas of psychological wellbeing, including autonomy, positive relations with others, personal growth, self-acceptance and total psychological wellbeing However, emotional support negatively predicted autonomy. Indicating that looking for emotional support in others can influence an individual's state of personal agency by being concerned with what others think or even depend on others' opinions.

Instrumental support differs from emotional support as individuals seek out help, advice or additional information that can assist them in overcoming their stressor. It therefore possesses a problem-solving quality (Carver, 1989). Instrumental support simply put is seeking advice from others. It was positively correlated to environmental mastery and positive relations with others in this study. Seeking advice and information from others can help one understand the conditions surrounding COVID-19 allowing one to make sense of the changes due to COVID-19 and how to then navigate their environmental changes effectively. Contrary to these results, instrumental support was associated with poorer mental health during the Portuguese national COVID-19 lockdown (Jarego et al., 2021). This has implications for further research into the extent of instrumental support during times of crisis.

Denial, behavioural disengagement and self-blame produced negative associations to psychological wellbeing in our study. Denial is an emotion-based, less than functional coping strategy represented as denying the events that occurred. The cognitive load of the pandemic can force individuals into a state of denial, as the first encounter to experiencing grief as seen in the Kubler-Ross 5 stage theory of grief (Chen et al., 2020; Roy, Sinha, 2020). This can then exacerbate psychological dysfunction, resulting in lower wellbeing. Behavioural disengagement is an avoidant coping strategy that indicates a person would give up trying to deal with stressor. It is also related to feelings of helplessness (Carver, 1989).

Self-blame indicates that individuals who tend to blame themselves for the events that occurred would likely experience lower psychological wellbeing. This is in line with a study indicating that self-blame to be negatively associated with elements of psychological wellbeing such as self-acceptance, autonomy and environmental mastery (Balzarotti et al., 2016). Umucu and Lee (2020a) found self-blame to predict psychological function significantly and negatively during COVID-19, align with the results of our study wherein self-blame negatively predicted all areas of psychological wellbeing except personal growth. This is consistent with less adaptive coping responses resulting in lower wellbeing (Chao, 2012).

The Global Mental Health measures a breadth of psychological wellness that includes, general mental health, sociability and relationships, quality of life and emotional problems (Hays, Schalet, Spritzer, Cella,2017), making up the *mental health* construct in our study. Mental health significantly and strongly predicted all areas of psychological wellbeing in our study. The mental health measure can therefore be a useful short-form measure of psychological well-being for future studies.

COVID-risk is measure of individuals who are at high risk of the devastating effects of COVID-19, this includes those over the age of 65 and with specified medical conditions. COVID-risk positively predicts

personal growth. Personal growth refers to the ability to realize one's potential and seek out new experiences. A high scoring on personal growth indicates individuals feel they are fulfilling their potential and look for opportunities to develop whereas a low score would indicate a lack of interest and feeling incapable of developing new skills. This indicates that individuals at high risk of COVID-19 are likely to seek out new experiences to fulfil their potential. Experiences of COVID-19 produced increased personal growth in both young and old (Lopez et al., 2020). To understand this relationship Lopez et al., (2020) indicated as COVID-19 presents unique and challenges conditions for those at risk, and the experience of witnessing ailing relatives or even witnessing death due to the virus can guide many to opportunities to grow and develop skills to aid them in troubling times, thus making sense of the positive contribution to personal growth (Lopez, et al., 2020).

Number of people in household negatively predicted autonomy, environmental mastery and psychological wellbeing. Although not a direct hypothesis for this study, it is interesting to uncover what this relationship between number of people in household and psychological wellbeing might mean. It is useful to understand the value of multi-generational households in traditional and culturally strong households. Multigenerational households are common in traditional and typically non-western households where caring for older generation is valued and part of the family system (Burholt, Dobbs, 2014). Research indicates the benefits for older generations living in a multi-generational household for their psychological wellbeing (Silverstein, Cong, Li, 2006;). However, it is noted that living in a multi-generational household produce higher levels of caregiver strain (Pruchno et al., 1997). This impacts the wellbeing of those taking on the role of caregiver, such as the wife and husband, and the strain of care can add to challenges in changing one's environment to suit one's wellbeing (environmental mastery) as well as having independence (autonomy).

5.5 Relationships between religious coping and psychological wellbeing among South African Muslims during COVID-19

Religiosity and religious coping styles were significant contributors to wellbeing in our sample of Muslims during the COVID-19 pandemic. Religious practice and belief are significant aspects in a Muslim's life and plays a role in their wellbeing. This is clear in a study where Muslims identifying as religious resulted in greater levels of health and happiness compared to those with liberal religious beliefs (Green, Elliot, 2010). Indicating that psychological wellbeing and religious beliefs were positively related. In our study, measures of religiosity positively predicted environmental mastery, positive relations with others and total psychological wellbeing. To illustrate this, environmental mastery has

been linked to religious practices (Bayani, Esmaeili, Ganji, 2018) as well as self-efficacy and emotional regulation (Ross, Mirowsky, 2013; Archuleta, Lakhwani, 2015).

Turning to religion from the Brief COPE scale was positively associated with environmental mastery, positive relations with others and self-acceptance. *Turning to religion* entails various aspects of religious practice or expression dependent on the individual which results in a multitude of religious coping responses. In order to understand the relationship between coping responses and domains of psychological wellbeing, it is necessary to uncover how Muslims may use their religion to cope. Muslim religious coping can be described in 3 areas of functioning namely, cognitive, behavioural and social (Adam, Ward, 2015). According to Adam (2015) the cognitive element focuses on God consciousness, also known as *Taqwa* in Islam. In relation to coping, Muslims would reconcile their state of conflict with their belief system through internal responses which can be described in the Islamic tradition as acceptance, *sabr* (patience), and *shukr* (gratitude). These responses are reflected in the Islamic holy book, the Quran, "Did We not expand for you, [O Muhammad], your chest? And We removed from you your burden. Which weighed upon your back. And raised high for you your repute. For indeed, with hard [will be] ease" (Qur'an 94:1-5). Indicating that for Muslims, a reliance on God forms part of their belief system. This can be seen in Religious Coping by Pargament (2000) where Positive Religious Coping reflects a Collaborative Religious Coping subtype illustrated as, "I tried to put my plans into action together with God".

Related to this is the behavioural coping responses which include religious ritualistic acts such as *salah* (prayer), *dua* (supplication) and *dhikr* (remembrance of God). Muslims use the phrase "Alhamdulilah" (Praise be to God) as a form of *dhikr*. This is used in times of distress by focusing on the positive outcomes of a situation and encouraging perseverance. It is also featured in times of happiness to illustrate gratitude (Adam, Ward, 2015). This emphasizes both Taqwa (God-consciousness) as well as Qadr (Divine will). It indicates how religious coping can relate to self-acceptance whereby individuals would be inclined to recognize their limitations and have a positive attitude (self-acceptance) if they continually repeat a phrase that represents gratitude and a resolve in God's Will. Recognizing that COVID-19 is beyond one's control, persevering through the challenges associated with it and being grateful for the positives in one's life can likely contribute positively to psychological wellbeing.

The impact of religious practice on environmental mastery is illustrated in a study that indicated fasting can positively contribute to multiple areas of wellbeing and produce higher levels of environmental mastery, suggesting that they had control over their surroundings and could make positive use of

opportunities that present themselves (Bayani, Esmaeili, Ganji, 2018). Fasting is an act of restraint over food, water and negative habits such as lying, slandering and profanity can act as a means to attain mastery over oneself (Bayani, Esmaeili, Ganji, 2018). Positing that religious coping in the form of religious practice can allow individuals to have control over their environment as well as manage the changes that occur during COVID-19.

With regards to the social aspect, congregation can provide a means of social and emotional support that can buffer against psychological distress (Bartowski, Acevedo, Van Loggerenberg, 2017). Levin (1996), Oman and Thoresen (2002) identified that religious practices can offer a social support to its adherents by means of religious congregations. This can be evidenced in worship service attendance in the reduction anxiety symptoms among religious adherents (Bartowski, Acevedo, Van Loggerenberg, 2017). During the COVID-19 lockdown many religious gatherings were halted, this meant that the daily congregational prayer were conducted at home. However, *turning to religion* showed a positive relationship to *positive relations with others* in our sample indicating that despite not having the social interaction and support with congregation, Muslims still gained pleasure and comfort from close relationship with others. Islam places much emphasis on family life and is considered a divinely ordained institution whereby marriage, the rights of spouses, children and parents have been discussed through the Quran and from teachings of the Prophet Muhammad (Ahmed, 1974). The life of Muhammad also presents an example in which Muslims strive to life by, and the focus on community, being kind to parents, spouses and one's children and encouraging family ties has been reported to be akin to faith itself (Ahmed, 1974; Adam, Ward, 2015). Therefore, the promotion of social bonds in the Islamic belief system carries through the family structure which can add to positive wellbeing during this time.

The Religious Coping scale used in this study is classified as either a positive religious coping (Positive R Cope) or a negative religious coping (Negative R Cope) strategy. The positive religious coping method considers the feelings of having a secure relationship with God. The negative coping style can indicate an insecure relationship with God and with members of religious congregation (Paloutzian, Park, 2005). Positive R Cope was positively correlated to *personal growth*. This indicates that individuals who experience a secure relationship with God, and spiritual connectedness with others will likely be able to realize their own potential and look for opportunities in which to develop. However, Positive R Cope negatively predicted environmental mastery and positive relations with others. The Positive R Cope is focused on an individualistic expression in connecting with God, illustrated by items such as, "*Tried to see how God may be trying to strengthen **me** in this situation", Tried to put **my** plans into action together*

*with God", "Focused on religion to stop worrying about **my** problems".* This suggests a reliance on God to create a change in one's environment, whereas environmental mastery is the ability to choose and make changes in one's environment. This makes sense of the theoretical differences that exist between positive religious coping and environmental mastery. The emphasis on individual and not on the collective, suggest that individuals who turn to religion to cope, may not likely turn to others for help. This brings to light why some Muslims would prefer to turn to their religion in times of distress than seeking out help (Lowenthal, Ginnirella, Evdoka, Murphy, 2001). However, not much is known on the extent of the effects of positive religious coping on psychological function as most studies produced insignificant results in a Muslims sample (Ai, Peterson, 2003; Khan, et al., 2009; Berzengi, et al., 2017; Sharif, 2018; Shaw et al., 2019). As the Positive Religious Coping domain was produced from a Christian sample, the theological difference between Christianity and Islam may indicate why there has not been significant relationships to psychological wellbeing in Muslim samples.

The negative religious coping construct in our study showed significant negative relationships to all psychological wellbeing domains. This means that as individuals who greatly view events from an insecure religious point of view would likely experience lower psychological well-being. Negative R Cope produced the strongest negative relationship to *positive relations with others*. This suggests the more an individual views an event from an insecure religious perspective, the more likely they would feel isolated and have few close relations with others. Negative R Cope also negatively predicted self-acceptance. Self-acceptance is described as accepting one's limitations and having a positive self-regard. However, lower self-acceptance suggests individuals would feel less satisfied about themselves. This is further emphasised by previous studies wherein negative religious coping were significant in predicting psychological distress among Muslims during challenging events (Berzengi, et al., 2017; Sharif, et al., 2018; Khan, 2006; Gardner, 2014; Khan, 2009; Alfaksier, Coleman, 2011). As a result, negative religious coping methods among Muslims can result in psychological consequences which can impact overall wellness and functioning.

5.6 Limitations

5.6.1 Theoretical Limitations

The first conceptual limitation can be directed at the coping models used in this study. Stress and coping theory have been developed through a Western paradigm, which has limitations in understanding the potential role culture can play in coping (Chun, et al., 2006). Early coping and stress theory developed out of understanding the response to stressful situations which considers the context or environment of

the stressor. However, the coping transaction separates the individual from their experience by disregarding the meaning produced from these encounters (Chun, et al., 2006). The value of culture should be emphasised in accordance with the meanings produced from situations which could prompt different reactions (Chun, et al., 2006).

The Brief R COPE scale was developed from the experiences of Christian adherents (Pargament, Koenig, 2000). Despite both Islam and Christianity forming part of the Abrahamic faith, there still exists variability between the two, in terms of core beliefs, rituals and conduct.

5.6.2 Methodological limitations

From this study some methodological limitations can relate to the instruments and items used in the questionnaire. The scales used in this study namely, the Brief COPE scale, Brief R COPE and Psychological Wellbeing scale were not validated for this sample and only internal consistency reliability tests were conducted. From here, few concerns are presented. The Brief COPE scale contained a subscale presented as substance use. This subscale was not normally distributed, contained significant outliers which violated assumptions for parametric testing for correlation and regression statistics in this study. This may contribute to the Islamic belief forbidding alcohol consumption and drug use, suggesting that this coping strategy is unlikely to be used in Muslim population. From the Psychological Wellbeing Scale, the Purpose in Life subscale produced low reliability (0.11). This subscale was subsequently removed from further analysis. This suggests the items measuring this construct were not clear enough for this sample and participants may not relate to the items that measure the construct. However, the Purpose in Life subscale produced adequate reliability in an Iranian sample with a coefficient of .70 (Bayani et al., 2008). This indicates that further research into the reliability of Purpose in Life is necessary in a South African Muslim population.

In terms of participants a few limitations were found. Majority of the sample was made up of the Indian race group (96.6%). Despite Indians representing the bulk of the Muslim population in South Africa the Muslim community is growing and it would be imperative to get a holistic and rounded understanding of all Muslim race groups and if there can be cultural implications to coping and religious coping experiences.

From the demographic section, a religious orientation question was presented in a 1 to 5 likert point scale. This question ranged from *not so religious* to *very religious*. It may be likely that each participant may perceive *not so religious* and/or *very religious* differently as there was no descriptions provided to ascertain what each label meant. Individuals could gauge where their religious beliefs might fall in light

of popular or socially relevant knowledge. However, the extent to what the researcher views as a religious orientation and the participants view may contrast. This may be more evident if the researcher is outside of the religious faith. To provide illustrative markers for each point on the likert point scale for this question could improve the conceptualization of the results found in this study.

Due to the unique circumstances surrounding COVID-19, individuals reported fear of financial strain due to the pandemic (Stats SA, 2020). Questions related to socio-circumstances of Covid-19 can shed some light into its potential contribution to psychological well-being and coping in this context.

5.7 Recommendations for future research

Appraisal is an individual's evaluation of what the stress is doing to their wellbeing and coping is the effort in thought and action to mitigate the stress on their wellbeing (Carver, 1989). The appraisal is considered a mediator between the stressor and the coping style (Parker, Endler, 1995). The appraisal process is separated into primary and secondary appraisals and is cognitively understood as, "how is this situation affecting me?" and "what can be done about it" (Lazarus, 1984). With this, an individual can almost immediately assess their situation, what it does to their well-being and the tools they have at their disposal to overcome it. Future research can probe into the appraisal process to go in-depth into its function in the coping process which can make sense of the coping styles used in the sample population.

The mental health subscale found in the Global Health and Mental Health instrument produced greater predicting power for psychological well-being in this sample. Scales to measure anxiety and depression can expand on the mental health implications found in this study. This study did not use the Religious COPE long-form, and validity testing was not conducted in this study. Future research can explore the psychometric properties of the Religious COPE scale in the South African Muslim population to determine its effectiveness and suitability. To determine the fit of constructs in our sample, a confirmatory factor analysis test can be conducted. Similarly, the Psychological Measure of Islamic Religiousness (Abu Raiya, 2008) covers religious cope, religiosity and psychological well-being and its application can provide a better suitability as it was developed for the Muslim population.

Many correlational studies involving coping and wellbeing during COVID-19 were focused on subjective wellbeing which is a measure of an immediate state of wellness. It would be useful to understand the impact of COVID-19 on South Africans immediate state of wellness such as positive or negative affect and life satisfaction to uncover their most current affective state which can provide insight into the

emotions and mood attached to this event which then has implications for long-term psychological wellness. COVID-19 is a new phenomenon affecting individuals worldwide. Since 2020, studies have been published to explore this event, however due to its comparatively new circumstance there still exists a dearth of information on the on the effects of the virus on specific populations in South Africa. Investigating coping styles among different populations in South Africa in relation to COVID-19 can prove useful in the exploration of this new phenomena in the South African context which can aid in development of effective intervention strategies. In addition, future research can consider investigating COVID-19 mental health help-seeking behaviour in South Africa which can provide an opportunity to examine the extent of mental health structures available for individuals who have experienced significant psychological distress due to the virus. This paves way for the development of better mental health care.

5.8 Concluding note.

This study aimed to investigate the relationship between coping, religious coping and psychological wellbeing among South African Muslims during the COVID-19 pandemic. The findings of this study provide useful information surrounding the coping strategies employed and their impact on wellbeing among a religious denomination in South Africa. The study revealed that South African Muslims made use of Acceptance and Religious coping strategies during this time. Acceptance can be related to Islamic teachings of patience, gratitude and acceptance of life circumstances, which encompasses their concept of Qadr or God's Will. The use of Religious coping indicates that Muslims use their religious belief and practices as a resource in times of stress or uncertainty. With regards to psychological wellbeing, participant's indicated above average state of wellbeing, suggesting a relatively stable psychological wellness was found among Muslims during COVID-19. In terms of the relationships between coping and psychological wellbeing, the use of Acceptance, Positive reframing, Active coping and Emotional support were found to be significantly and positively related to psychological wellbeing. This matches previous studies wherein acceptance, positive reframing and active coping were commonly used coping strategies during COVID-19 and contributed positively to wellbeing (Park et al., 2020; Zacher, Rudolph, 2020). Positive Religious Coping was positively related to personal growth, whereas negative religious coping was negatively related to all psychological wellbeing domains. However, the statistical tests for Positive R Cope and Negative R Cope made use of a non-parametric test, reducing its statistical power and providing a caveat for interpreting the results. Limitations indicated that the scales of measure were developed in Western communities and implores the need for culturally and multi-religiously sensitive

items. This is evident in low reliabilities, and constructs that were not significant. Future research can probe into coping and religious coping in different communities and cultures

. Not many studies were focused on the psychological wellbeing construct which measures a long-term mental state. Near future studies can investigate the immediate affective state of wellness among South Africans during COVID-19, such as subjective wellbeing. This can have implications for understanding the immediate psychological outcomes of COVID-19 among South Africans which adds to the development of therapeutic interventions tailored to treating the effects of COVID-19.

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Appendices

Appendix A: Ethical Clearance

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT ETHICS COMMITTEE
CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE:	**PROTOCOL NUMBER: MASPR/20/06**
PROJECT TITLE:	The psychological wellbeing, ways of coping and religious coping among South African Muslims during the 2020 covid19 pandemic
INVESTIGATOR	Gani Salma (1853848)
SCHOOL/DEPARTMENT OF INVESTIGATOR	SHCD/Psychology
DATE CONSIDERED	12 June 2020
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	Low Risk
EXPIRY DATE	31 December 2022

ISSUE DATE OF CERTIFICATE 21 June 2020 **CHAIRPERSON** (Dr Sahba Besharati)

cc: Prof. Sumaya Laher (Supervisor)

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

_____ _____/_____/_____

Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix B: Participant Information Sheet

Title: The relationship between coping and psychological wellbeing among South African Muslims during the COVID-19 pandemic.

Dear Sir/Madam

Hello! My name is Salma Gani- I am currently completing a Master's degree in Social and Psychological Research at the University of Witwatersrand. I am currently completing a research study aimed at understanding the coping strategies, psychological wellbeing and religiosity in Muslims in South Africa during the COVID-19 lockdown period. This study is anticipated to add to the body of knowledge in psychology by understanding the role of culture and religion during a stressful time.

This study requires participants to answer a questionnaire which will take 30-45 minutes to complete. There are no options for personal details such as names to be filled out so at no point will we know who you are. Your participation is voluntary and there are no advantages or disadvantages in participating in this study.

Your responses will remain confidential and anonymity is assured. Results of the responses will be grouped together, so there will be no means to identifying individuals results. The results will only be accessible to me and my supervisor for analysis purposes and will be stored on a password protected computer. The data from the questionnaire will be kept for the period of this study on a password protected online storage and will be destroyed thereafter.

The results of this study will be available in the form of a summary sheet within four months of completion of the questionnaire. You may request a summary by emailing me. The findings of this study will be in a research report. It may also be used in conference presentations and journal articles.

The questionnaire is based on international standardized tests, so we are unable to change these questions. Please answer to the best of your ability.

With this, I invite you to participate in my study. Your contributions will be greatly appreciated. We will take your submission of the questionnaire as consent to use your responses as part of the group data.

So, by completing the survey and clicking 'done' at the end will constitute consent to participate in the study.

If you have any questions with regards to the information above or the research, please feel free to contact me. My email address appears in the signature below.

If you find you are unable to cope and need extra help, here are numbers that can be of assistance:

South African Depression and Anxiety Group (SADAG): 076 882 2775

Islamic Careline: 011 373 8080 or 078 727 1334

Islamic Helpline: 011 854 7242

You may also contact Shaun.Schoeman@wits.ac.za from the Wits Human Research Ethics Committee if you have any concerns about the ethics of this study.

Thank you for taking the time to read this.

Researcher: Salma Gani
salmagani@hotmail.co.za

Supervisor: Prof Sumaya Laher
sumaya.laher@wits.ac.za

15.3. Appendix C: Questionnaire

Demographic information

1. Age: _____
2. Gender: _____
3. Which province do you reside in?

☐ Gauteng ☐ Western Cape ☐ Kwa Zulu Natal ☐ Free State ☐ North West

☐ Limpopo ☐ Mpumalanga ☐ Eastern Cape ☐ Northern Cape

4. Population group * for statistical purposes only, not meant to offend.

☐ White ☐ African ☐ Indian ☐ Coloured ☐ Other (please specify): _____

5. What is your home language? (please choose one)

☐ Afrikaans ☐ English ☐ IsiNdebele ☐ IsiXhosa
☐ IsiZulu ☐ Sepedi (North Sotho) ☐ Sesotho
☐ Setswana ☐ SiSwati ☐ Tshivenda
☐ Xitsonga ☐ Other (please specify):_____

6. Highest level of education

☐ Primary school ☐ high school grade ☐ matric ☐ undergrad degree

☐ postgrad degree ☐ diploma ☐ other

7. What is your religious affiliation?

☐ No religion ☐ Christianity ☐ Hinduism ☐ Islam ☐ Judaism
☐ Traditional African Religion ☐Other (please specify): _____

8. Please rate your level of religiosity with 1 being “not so religious” and 5 being “very religious”.

_____

10. Marital Status:

☐ Single ☐ Married ☐ Widowed ☐ Other

13. How many children do you have?_____

12. Number of people in your household (including you):

☐ 1 person ☐ 2-3 people ☐ 4-6 people ☐ 7 and more people

13. Are you currently on any medication?

☐ Yes ☐ No

14. Have you been diagnosed with any chronic medical condition, including any mental health conditions?

☐ Yes ☐ No

If yes, please specify:_____

Patient-Reported Outcomes Measurement Information System (v 1.2) Global Physical Health Scale and Global Mental Health Scale

Global Physical Health Scale

1. In general, how would you rate your physical health?

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

2. To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?

☐ Completely ☐ Mostly ☐ Moderately ☐ A little ☐ Not at all

3. In the past 7 days, how would you rate your pain on average?

---

0 = no pain 1 2 3 4 5 6 7 8 9 10 = worst pain imaginable

4. In the past 7 days, how would you rate your fatigue on average?

☐ None ☐ Mild ☐ Moderate ☐ Severe ☐ Very severe

Global Mental Health Scale

1. In general, would you say your quality of life is:

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

2. In general, how would you rate your mental health, including your mood and your ability to think?

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

3. In general, how would you rate your satisfaction with social activities and relationships?

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

4. How often have you been bothered by emotional problems?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

Brief COPE Scale- Carver (1997)

		I have not been doing this at all	I have been doing this a little bit	I have been doing this a medium amount	I have been doing this a lot
1.	I've been turning to work or other activities to take my mind off things.	1	2	3	4
2.	I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3.	I've been saying to myself "this isn't real".	1	2	3	4
4.	I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5.	I've been getting emotional support from others.	1	2	3	4
6.	I've been giving up trying to deal with it.	1	2	3	4
7.	I've been taking action to try to make situation better.	1	2	3	4
8.	I've been refusing to believe that it has happened.	1	2	3	4
9.	I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10.	I've been getting help and advice from other people.	1	2	3	4
11.	I've been using alcohol or other drugs to help me get through it.	1	2	3	4
12.	I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
13.	I've been criticizing myself.	1	2	3	4
14.	I've been trying to come up with a strategy about what to do.	1	2	3	4

15.	I've been getting comfort and understanding from someone.	1	2	3	4
16.	I've been giving up the attempt to cope.	1	2	3	4
17.	I've been looking for something good in what is happening.	1	2	3	4
18.	I've been making jokes about it.	1	2	3	4
19.	I've been doing something to think about it less, such as going to movies, watching tv, reading, daydreaming, sleeping or shopping	1	2	3	4
20.	I've been accepting the reality of the fact that it has happened.	1	2	3	4
21.	I've been expressing my negative feelings.	1	2	3	4
22.	I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
23.	I've been trying to get advice or help from other people about what to do.	1	2	3	4
24.	I've been learning to live with it.	1	2	3	4
25.	I've been thinking hard about what steps to take.	1	2	3	4
26.	I've been blaming myself for things that happened.	1	2	3	4
27.	I've been praying or meditating.	1	2	3	4
28.	I've been making fun of the situation.	1	2	3	4

Brief R Scale- Pargament (2011)

		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1.	Looked for a stronger connection with God	1	2	3	4	5
2.	Sought God's love and care	1	2	3	4	5
3.	Sought help from God in letting go of my anger	1	2	3	4	5
4.	Tried to put my plans into action together with God	1	2	3	4	5
5.	Tried to see how God may be trying to strengthen me in this situation	1	2	3	4	5
6.	Asked for forgiveness for my sins	1	2	3	4	5
7.	Focused on religion to stop worrying about my problems	1	2	3	4	5
8.	Wondered whether God had abandoned me	1	2	3	4	5
9.	Felt punished by God for my lack of devotion	1	2	3	4	5
10.	Wondered what I did for God to punish me	1	2	3	4	5
11.	Questioned God's love for me	1	2	3	4	5
12.	Wondered whether my religious institutions had abandoned me	1	2	3	4	5
13.	Decided the devil made this happen	1	2	3	4	5
14.	Questioned the power of God	1	2	3	4	5

Psychological Wellbeing scale- Ryff (1995)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	I like most parts of my personality.	1	2	3	4	5
2.	When I look at the story of my life, I am pleased with how things have turned out so far.	1	2	3	4	5
3.	Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5
4.	The demands of everyday life often get me down.	1	2	3	4	5
5.	In many ways I feel disappointed about my achievements in life.	1	2	3	4	5
6.	Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5
7.	I live life one day at a time and don't really think about the future.	1	2	3	4	5
8.	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5
9.	I am good at managing the responsibilities of daily life.	1	2	3	4	5
10.	I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5
11.	For me, life has been a continuous process of learning, changing and growth.	1	2	3	4	5
12.	I think it is important to have new experiences that challenge how I think about myself and the world.	1	2	3	4	5
13.	People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5

14.	I gave up trying to make big improvements or changes in my life a long time ago	1	2	3	4	5
15.	I tend to be influenced by people with strong opinions.	1	2	3	4	5
16.	I have not experienced many warm and trusting relationships with others.	1	2	3	4	5
17.	I have confidence in my own opinions, even if they are different from the way most other people think.	1	2	3	4	5
18.	I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5

Thank you for participating in this study!