Phenomenology and Interpretations of Sleep Paralysis: An Aotearoa New Zealand Sample

A thesis presented in partial fulfilment of the requirements for the degree of

Master of Science

In

Psychology

At Massey University, Manawatū, New Zealand.

Francesca Sullivan

2023

Abstract

Sleep Paralysis (SP) is a sleep-related experience in which the individual cannot move or speak, yet remains cognisant of their immediate environment. Although described as "hallucinations" within biomedical discourse, multi-sensorial perceptions that often accompany SP have given rise to numerous cultural, spiritual and supernatural explanatory models. Whilst cross-cultural research has investigated the experience within several populations, no studies have investigated the experience within Aotearoa New Zealand. In the present qualitative, phenomenological study, 12 individuals were recruited using stratified purposive sampling and interviewed regarding their experience(s) of SP. Through inductive thematic analysis (TA), themes were categorised under four domain summaries: Phenomenological Characteristics, Interpretations, Support and Coping Strategies. Two major interpretive models were identified; biomedical and spiritual, which influenced how SP was understood, explained and responded to by participants. Participants conveyed a reluctance to disclose SP for fears of being labelled mentally ill, whilst others felt judgement toward their spiritual worldviews which deviated from social norms. Future directions may include deepening the knowledge surrounding how the experience is conceptualised through a lens of te ao Māori, in addition to further exploration into the beneficial aftereffects of positive SP experiences. A quantitative follow-up study may also be of value to generalise findings to the greater population.

Acknowledgements

I would first like to express my deepest gratitude to my supervisor, Dr Nicole Lindsay, for her ongoing guidance, support and encouragement. Her knowledge, patience and timely feedback throughout this project was invaluable and gave me the confidence to keep going through the research process.

I would also like to extend my sincere thanks to each of those who participated in the study. Their honest and insightful kōrero provided a wealth of information which allowed me to examine this topic through a number of different lenses.

Finally, I would like to thank my friends and whānau for supporting me throughout this journey. The reassurance they gave when things felt overwhelming was very much appreciated.

Preface

About 15 years ago, I experienced sleep paralysis for the first time. I recall lying in my bed in complete confusion as I drifted in and out of consciousness. As distressing as it was to do so, I recall trying my best to fight against the paralysis, a struggle which felt like a never-ending loop. Gradually, experiences of this nature became more frequent. Each experience welcoming a novel addition, such as hearing music and interacting with people I hadn't had contact with in years.

An experience that has stuck with me is one that occurred during my undergraduate psychology degree. I had just flown home for an end-of-semester break and that night, I broke free after what felt like the longest battle yet. Although I was very aware of what was about to ensue as soon as it started, nothing could have prepared me for the level of helplessness I felt this time. I remember looking toward my bedroom door, actively thinking of everything I didn't want to see burst through it. However, I found the more I fed the fear, the more those very things would manifest into what I would see. As soon as I regained control, I remember running upstairs to my parents shaking, sweating and crying. With the knowledge I had recently learned from my "Introduction to Abnormal Psychology" class, I remember feeling distraught as I questioned what these experiences may indicate in terms of my mental health.

Curiosity drove me to speak to my friends about these experiences. I was often met with "you've had this too?" followed by in-depth descriptions of the most bizarre and twisted storylines. I remember the relief I would feel when others would express similar experiences, I was not abnormal after all and I was certainly not alone. However, when raising the issue with my GP I was met with a drastically different response. Although this was not the reason for my visit, I explained my experience to which I was met with hesitation. Scratching his head, he began to key "Sleep Paralysis" into Google. Although he appeared intrigued, I found the experience to be quickly dismissed. I wasn't probed with any follow-up questions before the topic shifted, so I recall leaving the doctor's office thinking it must not be a big deal.

Through personal experience, I quickly discovered that the sleep paralysis phenomenon is one widely experienced yet little known scientifically, which may explain my doctor's confusion. I was intrigued to learn of the widely varied cultural models applied to the experience and the spiritual significance such experience has for many people. As a person of mixed heritage, with Māori ancestry, I'm curious to understand how this event is understood through the lens of te ao Māori. Growing up with little knowledge of the deeply spiritual realities of my ancestors, exploration through my thesis allowed me to place my experience into another model – a spiritual model that I have found to sit more comfortably within my personal worldview. Rather than a perspective that something was malfunctioning within my body, which I grew up believing was the *only* meaning to be drawn from such experiences, this thesis provided me with another lens to view my SP.

As an experience that once sent me into a spiral of panic and despair, I now use positively to search for meaning and connection. For others and my younger self, I hope this study contributes positively to the literature and shines a light on the many ways SP can be understood and experienced. In doing so, I hope widening the lens of SP can help to normalise and elevate different perspectives, ultimately setting the basis for a more inclusive and harmonious society.

Table of Contents

List of Tables

Introduction

Kerry, 19 years old, had been studying late into the night for several weeks preparing for exams. Their regular sleep schedule had been impacted which added to their stress levels. Two nights before what Kerry considered to be a very important exam, they decided to go to bed much earlier than normal to catch up on missed sleep. That night as Kerry drifted off to sleep, they jolted awake and soon realised they couldn't move their hands. In fact, Kerry couldn't move any part of their body. The bedroom door flew open and a shadowy figure appeared, approaching Kerry. There was no doubt in Kerry's mind that this was a real encounter, after all, they could recognise their room and could feel the entity place pressure upon their chest. After what felt like hours, the entity disappeared and voluntary muscle control returned. Despite this, Kerry still felt agitated and fearful to which they responded by turning on their light. To avoid this experience happening again, they kept themself awake by scrolling YouTube for the remainder of the night.

The above fictional account describes a common sleep-related phenomenon widely reported by many throughout history. Often accompanying a brief period of immobility are vivid, multisensorial perceptions where individuals report seeing, hearing or sensing a presence (Cheyne, 2005; Cheyne & Girard, 2007; Cheyne, Newby-Clark, et al., 1999; Cheyne, Rueffer, et al., 1999; Girard & Cheyne, 2004). These vivid perceptual experiences are typically threatening in nature and often manifest into the form of an intruder within the individual's environment (Cheyne, Rueffer, et al., 1999; Hufford, 1982; Solomonova et al., 2008). With the experiencer rendered temporarily immobile and vulnerable to the perceived threat, this specific type of sleep-state tends to elicit strong emotive responses, such as fear and terror, sometimes reaching clinically significant levels of distress (Cheyne & Pennycook, 2013a; Hufford, 1982; Sharpless & Grom, 2016).

Experiences as described above are predominantly recognised as *sleep paralysis* (SP) within Western[1], secular societies and scholarship alike. From a scientific viewpoint, the experience occurs due to the intrusion of normal sleep processes into the individual's waking state (Olunu et al., 2018; Stefani & Högl, 2021). Essentially, every night the human body will enter paralysis in a certain phase of sleep, a primal and protective mechanism to keep us from 'acting out' our dreams (Jalal, Romanelli, et al., 2021). It is only when this phase of sleep continues into the waking state that SP manifests – causing paralysis and dreaming whilst seemingly awake. Often deemed distressing by those who have been affected, it is understandable why many desperately seek an explanation.

[1] 'Western' within this context refers to geographical areas in which are populated by 'WEIRD' societies – Western, Educated, Industrialised, Rich and Democratic (Kanazawa, 2020). 'Western' societies typically refer to some Western and Central European countries in addition to the United Kingdom, the United States and other countries such as New Zealand, Australia and Canada.

Dominant, Western explanations attributed to the experience have transformed radically throughout history. Early records of Hippocrates describe SP as a Godly experience, symbolic of wealth and fortune (De Sa & Mota-Rolim, 2016). Whilst this explanation appeared overwhelmingly positive, general perceptions shifted following the arrival of Christianity, in which the experience was quickly attributed to the works of the devil due to its sexual connotations (Sharpless & Doghramji, 2015; Stewart, 2002; Wróbel-Knybel et al., 2018). It appears that this downward trajectory regarding general perceptions of SP has continued into modern day, in which the experience is now widely attributed to pathological roots (Parker & Blackmore, 2002; Solomonova et al., 2008).

Contemporary research indicates the transient nature of SP explanations, not only across time but culture too. Cross-cultural studies have identified numerous models applied to the experience, often grounded within specific cultural narratives and folklore. Within Newfoundland, Canada the experience is recognised as "The Old Hag Syndrome", a witch that sits upon the chest (Ness, 1978). Within Egypt, the experience is often attributed to an assault of the "Jinn" – invisible entities that terrorise their victims as a result of greed or sinfulness (Jalal & Hinton, 2013, 2015). Japanese cultural narratives attribute the experience to attempted spiritual communication, recognising the experience as "Kanashibari" (Fukuda et al., 1987; Yoshimura, 2015). Although often legitimised and considered normative within the respective culture, these spiritual or supernatural attributions appear to diverge substantially from Western norms. Rather, spiritual belief is often considered irrational and a contradiction to natural scientific law (Hufford, 2005). SP scholar, Ernest Jones, asserted his sceptical stance on spirituality stating that only those with "less tutored minds, such as those of children and savages" face difficulty with separating dreams from conscious life (1931, as cited in Hufford, 2005, p. 23). Unfortunately, this has often led to silencing of such perspectives for fears of ridicule and judgement (Jalal, Romanelli, et al., 2021; Jalal, Sevde Eskici, et al., 2021; Neal et al., 1994; Otto et al., 2006).

The lack of a suitable niche within Western paradigms means that spiritually interpreted experiences are likely to be pathologised. Thus, the risk of misdiagnosis as a result of cultural and/or other interpretive differences between clinicians and patients become a valid concern. With little known about SP and how it is understood, clinicians run the risk of misattributing symptoms to psychopathological constructs due to the similar phenomenology, such as that of psychotic disorders. In fact, despite no evidence suggesting that SP indicates psychosis, cases do exist where "hallucinations" accompanying SP have led to misdiagnosis of the disorder (Cheyne & Pennycook, 2013a; Douglass, 2003; Powell & Nielsen, 1998; Shapiro & Spitz, 1976).

It is important further awareness is brought to SP and how the phenomenon is understood. Especially so as Aotearoa New Zealand is a highly multicultural nation, comprised of six major ethnic groups: European New Zealanders, Māori, Asian New Zealanders, Pasifika while Middle Eastern, Latin American and African communities constitute the rest (StatsNZ, 2019). With regard to the high ethnic diversity, it is plausible that a large portion of the population subscribe to non-

medical, spiritual models of SP. In light of this, gaining a foundational understanding of SP within Aotearoa New Zealand is paramount. As Aotearoa New Zealand is a largely secular country with a significant Indigenous and immigrant population, local research is needed to understand how SP is experienced and conceptualised by those whom it affects. To the best of the researcher's knowledge, research within the area of SP has not been investigated within Aotearoa New Zealand. Rather, most studies conducted on the topic of SP appear focussed on causation and based overseas. Of these, an overwhelming number of studies appear quantitative, depending largely on the distribution of questionnaries and surveys, which have poor validity and reliability measures and impose pre-existing meaning (Sharpless & Barber, 2011; Sharpless & Doghramji, 2015). While very few studies utilise extensive in-depth interviewing, it appears participants are rarely given an opportunity to explain the ways in which they interpret the experience.

The present study therefore sought to explore SP utilising a qualitative, phenomenological approach. Using stratified purposive sampling to capture major variations within the data set, 12 participants provided first-hand accounts of SP through in-depth interviews, describing phenomenological characteristics and interpretive frameworks. Close attention was paid to how experiences were explained and understood by participants, as cross-cultural research indicates that culture-bound references and descriptors are commonly applied to the experience. The main research questions were:

- What are the phenomenological characteristics of SP as experienced by Aotearoa New Zealanders?
- How do Aotearoa New Zealander's interpret their experiences of SP?

Contents of this thesis are organised in the following order: Chapter one will explore the experience through a scientific, biomedical lens. This will include how SP is conceptualised, in addition to lifetime prevalence and challenges faced in determining these rates. This chapter will also examine the association between SP and psychopathology in addition to how SP is currently managed through clinical means. Chapter two will describe alternative cultural perspectives of SP, which will be illustrated through examples of four cultural models applied to the phenomenon. This chapter will also convey the importance of acknowledging different perspectives applied to SP within both academic and clinical settings. Finally, this chapter will conclude by outlining the implications of acknowledging different perspectives of phenomena within Aotearoa New Zealand. Chapter three will present a detailed description of the methods used within the current study. Chapter four will present the results, with themes and subthemes organised under four domain summaries. Chapter five will discuss findings and relate these to prior research within the field. This chapter will also include limitations of the study and recommendations for future directions. Finally, chapter six will conclude the thesis.

Chapter One: A Scientific Perspective

This chapter will present the current state of literature surrounding SP, which is largely dominated by the Western, scientific lens. An overview of phenomenological characteristics is described – such as the common sense of paralysis, chest pressure, sense of realism and associated multi-sensorial perceptions. The lifetime prevalence of SP, in addition to the challenges faced in regard to determining these rates, is also discussed. SP's neurophysiological basis and primary causes will be elaborated upon. As psychopathology has long been associated with SP, research investigating the association between SP and certain psychological constructs will be discussed. Although few treatments are currently available for the treatment of SP, the most commonly referenced means of clinical management will be outlined.

Medical Anthropology of SP

Dominant Western understandings attributed to the sleep-related phenomenon currently known as "sleep paralysis" have transformed radically throughout history, illustrating the transient and impermanent nature of how such experiences are understood. The first known description in the literature derives from the records of Hippocrates 400 BC, indicating that the experience predates medical naming and has been recognised for over two thousand years (De Sa & Mota-Rolim, 2016). Ancient Greeks labelled the experience as *ephialtes,* loosely translated to "to jump on top of" - a direct reference to one of the core physiological symptoms of chest pressure that is frequently reported by experiencers (Stewart, 2002, p. 285). The Greek term often included "Pan" as a prefix, the horned God of the woods and flocks (De Sa & Mota-Rolim, 2016). It was widely believed that during an ephialtes, Pan would engage in sexual relations with the dreamer as a symbolic promise of a great future and wealth (Cheyne, Rueffer, et al., 1999; Sharpless & Doghramji, 2015; Stewart, 2002).

Following the arrival of the Christian era of the middle ages, the positive connotations of the experience transformed (De Sa & Mota-Rolim, 2016). The sexual connotations proposed by the Ancient Greeks appeared to oppose Christian values, in which sexual immorality was strongly prohibited (Stewart, 2002; Wróbel-Knybel et al., 2018). As a result, SP was seen widely attributed to the works of the "Devil" – a figure that elicited feelings of dread, paralysis, coldness and an inability to speak and act (Sharpless & Doghramji, 2015). Historical documents indicate that in addition to the Devil, the experience was also commonly attributed to demonic assault by "Incubi" or "Succubi" – entities that were believed to haunt their victims within their dreams and lure them with sexual temptation (Gordon, 2015; Olunu et al., 2018; Sharpless & Doghramji, 2015; Wróbel-Knybel et al., 2018).

In the latter part of the nineteenth century, psychology became the prevailing method of analysis and diagnosis for sleep-related phenomenon (Davies, 2003). The early psychoanalytic view of the nightmare was stimulated by one of Freud's students, Ernest Jones in 1931. In Jones' thorough psycho-analytical dissertation titled "On the Nightmare", the phenomenon was

diagnosed as “a form of angst attack” as the result of repressed psycho-sexual instinct (Jones, 1931, p. 54). Essentially, the intensity of fear and dread during episodes were thought to equate to the degree in which the repressed wishes sought to be expressed, thus violating the experiencer’s internal sense of morality (Sharpless & Doghramji, 2015).

The Biomedical Model and Current Definitions

The biomedical model of health and disease presents as the fundamental basis of Western medicine, which has dominated this field for the past two hundred years (Lyons & Chamberlain, 2006). As described by Lyons and Chamberlain (2006), assumptions of this model include:

- The body is distinct from psychological and social processes
- Physical disorders can be explained by disturbances of physiological processes
- Health is viewed as purely physiological in nature

As consistent with the assumptions of this paradigm, the current scientific term “sleep paralysis” infers that the experience is now primarily viewed as a condition concerning the material body. First coined by the British neurologist S.A. Kinnier Wilson in 1928, the experience was defined as “short, transient loss of volitional movements that appear when falling asleep or waking up” (Wróbel-Knybel et al., 2018, p. 176) – further highlighting the prioritisation of physical and observable symptoms within this paradigm. Relative to prior beliefs attributed to this phenomenon, such as a demonic affliction or repressed sexual conflict, SP is now predominantly framed as a sleep-related condition or “parasomnia” (De Jong, 2005, p. 1).

Earlier definitions of SP, such as by Goode (1962), described the experience as an “unusual neurologic phenomenon” (p. 1) involving an inability to move one’s limbs, to speak, to open the eyes that occurs upon awakening or more rarely, when falling asleep. In contemporary literature, SP is described as a parasomnia characterised by temporary paralysis during sleep onset or upon waking, a momentary inability to speak or move muscles in addition to extreme fear reactions and hypnagogic or hypnopompic hallucinations (Rauf et al., 2023). Although there are some minor discrepancies between definitions, such as the levels of ocular control, all definitions consistently include descriptions of sleep-related and transient paralysis (Cheyne, 2002; Denis, 2018; Sharpless & Kliková, 2019; Wing et al., 1994).

SP is regarded as a REM-sleep parasomnia and typically investigated within the context of narcolepsy (Bollu et al., 2018; Denis, 2018; Sharpless, 2016). Narcolepsy, a rare autoimmune sleep disorder, is characterised by four primary symptoms called the ‘narcoleptic tetrad’, which consists of: sleep attacks (spontaneous episodes of sleep), cataplexy (sudden loss of muscle tone during the waking state), hypnagogic hallucinations (perceptual experiences that occur upon falling asleep) and sleep paralysis (Kornum et al., 2017; Mitler et al., 1990; Ohayon et al., 2002). As 30% - 50% of individuals with an underlying diagnosis of narcolepsy are believed to experience SP, the

high prevalence of SP within this population has led many researchers to believe that SP is indicative of this condition (Awadalla et al., 2004).

Understanding SP as a diagnostic possibility in the absence of underlying narcolepsy has only received recognition within the last half century (Hufford, 2005). In 1979, the Sleep Disorders Classification Committees administered a survey and found SP present in 3-6% of respondents (Sleep Disorders Classifaction Committee, 1979). As the presence of SP within the survey appeared substantially higher than hypothesised, researchers rationalised these findings by attributing the 'inflated' figure to unidentified narcolepsy within their participant sample. Essentially, rationalising findings in this way suggests that scientific researchers have long demonstrated a reluctance toward acknowledging SP in the absence of an underlying pathological cause. Rather than challenging prior assumptions, findings were rationalised in a way that perpetuated the notion of SP as an abnormal, uncommon and pathological experience.

Within contemporary research, SP is now recognised to occur in healthy individuals. In these cases, the term "isolated sleep paralysis" (ISP) is preferred (Olunu et al., 2018; Sharpless & Doghramji, 2015). The second edition of The International Classification of Sleep Disorders (ICSD) first recognised that SP needed to be "isolated" from other conditions such as narcolepsy, and labelled this condition as "recurrent isolated sleep paralysis" (RISP) (American Academy of Sleep Medicine, 2005). In regard to diagnostic criteria, multiple episodes were considered necessary yet, the minimum quantity of episodes was not specified. Additionally, perceptual experiences and clinical impacts such as episode distress, were also not included within criteria. In this regard, the criteria suggests that patients experiencing predominantly pleasant episodes of SP could still be pathologised and plausibly reach diagnostic threshold. Recently, the third edition of the ICSD was released. All diagnostic criteria were retained within the ICSD-3, however, a requirement for the presence of clinically significant distress was included in addition (American Academy of Sleep Medicine, 2014).

Phenomenological Features

SP demonstrates a number of interesting characteristics that are not found in other sleep-related phenomena (Sharpless & Doghramji, 2015). As common features rarely manifest into a singular occurrence, the phenomenon constitutes a varied and diverse experience often leaving an emotional impact on whom it affects (Cheyne & Girard, 2007; Jalal, 2016). Despite the combination of features varying between episodes, a few distinct features have been identified as the most salient. As similar characteristics have been widely reported independent of biomedical, psychological or cultural explanations, these aspects point toward a common experiential structure (Cheyne & Girard, 2007; Cheyne, Newby-Clark, et al., 1999; Jalal & Ramachandran, 2014; Jalal et al., 2015; Paradis et al., 2009). These characteristics are outlined below.

Involuntary Atonia (Paralysis)

Possibly the most prevalent feature of the experience is the one from which the label is derived: sleep *paralysis*. During episodes, individuals tend to report limited control over bodily movements, although maintain the ability to open their eyes and report events within their surroundings (Davies, 2003; Hishikawa & Kaneko, 1965; Ramsawh et al., 2008). Given that speaking requires voluntary muscle control, narratives often include an inability to cry out for help (Sharpless & Doghramji, 2015). However, many reports of moans have been described nearer the end of SP experiences (Davies, 2003; De Jong, 2005).

Chest Pressure

Respiration may also be affected, or at least perceived to be affected due to the associated paralysis. Although respiratory movements remain intact, voluntary breathing is typically impossible (Jalal, 2016). This leads to feelings of chest pressure, throat constriction and shortness of breath that can exacerbate feelings of panic (De Jong, 2005; De Sa & Mota-Rolim, 2016; Jalal, 2016). While commonly described as "hallucinations" within the scholarship of SP, these multisensorial perceptions sometimes involve one being sat on, crushed or restrained by a perceived presence (Cheyne & Girard, 2007; Jalal, 2016).

Conscious Awareness

Although commonly referred to as a "sleep-related" phenomenon (Sharpless & Doghramji, 2015, p. 107), one striking feature of the experience is the individual's complete sense of consciousness. This feature may be understood as parts of the body and brain falling asleep or waking at differing rates – essentially, the body falling asleep prior to the individual falling into the unconsciousness of sleep, or parts of the body remaining 'asleep' upon consciously waking (Jalal et al., 2015). While the body remains paralysed as per normal sleep processes (as will be discussed further within this section), the mind remains active and cognisant of surroundings (De Jong, 2005; Jalal et al., 2015; Ramsawh et al., 2008; Sharpless et al., 2010).

Hypnagogic and Hypnopompic "Hallucinations"

Arguably, the most dramatic symptoms are often considered the associated, vivid perceptual content. Within an episode, the experiencer typically maintains an awareness of their environment which often becomes intertwined with these perceptions (Hufford, 2005; Sharpless & Doghramji, 2015). These multisensory experiences are recognised within literature as hypnagogic (upon falling asleep) or hypnopompic (upon awakening) "hallucinations" (De Jong, 2005; Jalal et al., 2015; Ramsawh et al., 2008); both of which will be referred to as "HH's" within this section.

Among various HH's, the common experience of a "sensed presence" is one of the most prevalent and frightening (Cheyne, Rueffer, et al., 1999; Hufford, 1982; Solomonova et al., 2008, p. 1). Constituted by auditory perceptions (hearing footsteps, voices and rustling), tactile perceptions

(tugging, touching or tingling sensations upon the skin) and fleeting shadows, the "sensed presence" refers to the vivid perception that a sentient being is within close proximity (Solomonova et al., 2008, p. 50). Essentially, as perceptions can occur in all sensory modalities, the apparent realism of these occurrences can generate significant distress (Girard & Cheyne, 2004; Otto et al., 2006; Parker & Blackmore, 2002). In addition to the common perception of a sensed presence, HH's may also involve illusionary sensations of movement – such as floating, flying and spinning (Cheyne, 2005; Cheyne & Girard, 2007).

In order to distinguish these types of perceptual experiences from one another, James Allan Cheyne and his colleagues developed a three-factor structure comprised of: Intruder, Incubus and Vestibular-Motor (V-M) categories (Cheyne, 2005; Cheyne & Girard, 2007; Cheyne, Newby-Clark, et al., 1999; Cheyne, Rueffer, et al., 1999; Girard & Cheyne, 2004). As previous research has appeared to group all HH's together into a singular category, this model was developed to effectively categorise common and distinct types of multi-sensorial perceptions that tend to co-occur with SP (Cheyne, 2005). As tested in several large samples, ranging from 459 (Cheyne, Rueffer, et al., 1999) to 5,799 (Cheyne, 2005) participants across multiple nations, their framework illustrates the seemingly universal essence of distinct forms of SP experiences.

"Intruder" and "Incubus" Experiences.

In accordance with Cheyne's model, experiences that involve a sensed presence, fear and both auditory and visual perceptions, are classified under "Intruder" (Cheyne, Rueffer, et al., 1999). Cheyne describes Intruder perceptions as involving a threatening presence, as signalled by assorted noises such as footsteps and voices (Cheyne, 2005). In a later publication Cheyne and Girard (2007) elaborate further upon this factor, specifying that while sometimes the intruder's presence is sensed, this category may also involve both visual and tactile sensations - such as the figure brushing across the individual and pulling at bed covers. Although distinct from Intruder experiences, "Incubus" experiences are typically described together with "Intruder" experiences as they often appear sequentially within a single episode (Cheyne, 2005; Cheyne & Girard, 2007). The Incubus category classifies sensations such as breathing difficulties, feelings of pressure upon the chest, pain and feelings of imminent death (Cheyne, 2005; Cheyne & Girard, 2007). In addition, Incubus experiences are often perceived as highly threatening and distressing situations, sometimes interpreted as violent physical or sexual assault (Cheyne & Girard, 2007).

Dependent on the experiencer's understanding of the phenomenon, the identity of the sensed presence can take numerous forms. Essentially, as HH's are vividly experienced across the three sensory modalities (auditory, visual and touch) they tend to invoke a sense of authenticity, thus inspiring individuals to assign culturally distinct interpretations to them (Cheyne & Girard, 2007; De Jong, 2005; Girard & Cheyne, 2004; Jalal, 2016; Otto et al., 2006). Interpretations regarding the entity vary widely but can range from demonic entities (Jalal et al., 2014), ghosts

(Wing et al., 1994), witches (Davies, 2003) or extra-terrestrial life force (McNally & Clancy, 2005) – interpretations that will be discussed further within chapter two.

"Vestibular-Motor" Experiences.

Within Cheyne's three-factor structure, analyses consistently yield a distinct type of HH that constitutes a stark contrast, in both content and emotion, from 'Intruder' and 'Incubus' sensations (Cheyne, 2003; Cheyne, Rueffer, et al., 1999). Rather than experiences that imply the presence of a threatening external agency, Vestibular-Motor (V-M) experiences appear more closely associated with sensations pertaining to bodily orientation and movement (Cheyne & Girard, 2007). Common reports of floating, flying, falling, spinning, out-of-body experiences (OBEs) and autoscopy (viewing oneself from an outside perspective) led to the development of this major category (Cheyne, 2005; Cheyne & Girard, 2007, 2009). In addition, frequent reports of illusionary limb-movement demonstrated by the experiencer, such as sitting, standing and locomotion, can also be grouped within this factor (Cheyne & Girard, 2009).

Rather than fear and panic, V-M sensations tend to elicit feelings of happiness and bliss (Cheyne & Girard, 2007). Although reasons for this stark contrast in emotional content are unknown, anecdotal evidence indicating the positive relationship between V-M experiences and lucid dreaming may point toward an answer. Essentially, V-M experiences can be used methodically to induce a lucid dream state – a type of dream where the individual becomes aware that they are dreaming thus, tends to be positively valanced (Emslie, 2014, as cited in Denis & Poerio, 2017; Hurd, 2010). In addition, anecdotal evidence also suggests that V-M experiencers can be manipulated to induce OBEs and "astral projection" (the soul leaving the physical body to travel to different places or dimensions) (Denis, 2018, p. 359). In this respect, it is plausible that positive emotional responses to this specific type of SP experience may be attributed to an individual's heightened sense of control, relative to the victimised position within both Intruder and Incubus experiences.

Fear and Terror

The intensity of SP experiences can manifest differently from person-to-person, as well as between episodes. As discussed prior, episodes can be mild or even pleasant in relation to V-M experiences (Cheyne & Girard, 2007). However, SP more commonly elicits strong emotional responses such as fear and terror – sometimes reaching clinically significant levels of distress (Cheyne & Pennycook, 2013a; Hufford, 1982; Sharpless & Grom, 2016). Essentially, regardless of the cultural context the experiencer is located within, emotional content such as intense anxiety, helplessness and fear have been widely reported in relation to episodes (Fukuda, 2005; Jalal & Hinton, 2015).

Brian Sharpless, a renowned figure in the field of SP research, asserted that “fear has often played a prominent role, and this is consistent with empirical data” (Sharpless et al., 2010, p. 1294). For instance, in one publication by Cheyne, Newby-Clark and Rueffer (1999), 90% of their student sample and 98% of their web-based survey sample reported fear associated with SP. Such findings are also corroborated by other pieces of research, such as Simard and Nielsen (2005) and Ramsawh et al. (2008) who found 97.78% and 89.90% of participants reported fear and distress, respectively. Although variation in the operationalisation of “fear” makes across-study comparisons challenging, findings generally support the notion that most experiencers consider SP to be a fear-laden event.

The origins of fear are rooted in several aspects of the experience, thus do not stem solely from frightening hallucinations. Some findings suggest that fear originates from the belief that the associated paralysis will be permanent (Hinton, Pich, Chhean, & Pollack, 2005; Koran & Raghavan, 1993; Ramsawh et al., 2008) while others believe the experience is indicative of impending death (Arikawa et al., 1999; Cheyne & Girard, 2007; Hinton, Pich, Chhean, & Pollack, 2005). More commonly, fear is considered to result from the feelings of paralysis (Cheyne, Newby-Clark, et al., 1999; Sharpless et al., 2010) which typically evokes a general sense of vulnerability and helplessness.

Lifetime Prevalence

Sharpless and Barber (2011) conducted a systematic review spanning five decades of research within fourteen geographical locations. Aggregating across studies, a total sample of 18, 330 participants generated a lifetime prevalence rate of 7.6% among the general population. Prevalence rates were seen to be elevated among students (28.3%) and psychiatric patients (31.9%). The authors hypothesised that elevated rates of SP within these two groups may be attributed to the fact that both groups tend to experience regular sleep disturbance, a commonly cited antecedent. Additionally, slightly more women (18.8%) were found to experience lifetime SP relative to men (15.7%). No age differences were identified as the majority of studies included in the review failed to report ages of their participants.

Current literature lacks consensus regarding why rates of SP differ between populations (Hinton, Hufford, et al., 2005). Individual study estimates range substantially, from as low as 2% to as high as 60% (Sharpless & Barber, 2011). Numerous researchers have attributed this disparity to the different methodologies used to assess prevalence rates (Denis et al., 2018; Ramsawh et al., 2008; Sharpless & Barber, 2011). According to a synthesis and review of academic literature proposed by Sharpless & Doghramji (2015), the vast majority of SP measures are in a self-report format. Self-report instruments are highly favoured in the field due to cost and time effectivity, suitability for mass screenings and lack of requirement for trained assessors. However, despite their vast popularity, numerous SP measures have not been extensively used or undergone any form of psychometric testing.

Another issue concerning methodology are the differences in framing and operationalisation of SP between instruments. Although many researchers within the field follow ICSD-2 criteria (American Academy of Sleep Medicine, 2005) such as Ramsawh et al. (2008) and Sharpless et al. (2010), some abstain from following a set rule or structure. As seen in one piece of research by Everett (1963), participants were asked whether they had experienced anything 'similar' to the medical description of SP rather than symptom checklists pertaining to individual criteria. Essentially, as SP lacks a standardised assessment procedure, this makes inter-study comparison challenging whilst also making the true prevalence difficult to determine. As lifetime rates of SP are poorly understood, this may be one reason as to why the experience typically goes unidentified and undiagnosed by clinicians (Jalal, Romanelli, et al., 2021).

The Neurophysiological Basis of SP

The unique characteristics of SP are consistently shown to be remarkably stable, independent of biomedical, cultural or psychological explanations (Hinton, Hufford, et al., 2005; Hufford, 2005; Jalal, Sevde Eskici, et al., 2021). In this regard, scholars have long considered the neurophysiological basis as a universal driver for the experience (Hinton, Hufford, et al., 2005; Olunu et al., 2018). According to scientific explanations, SP is believed to arise from the abnormal, ongoing continuation of REM-induced muscle paralysis and dreaming that transcends into an individual's conscious state (Olunu et al., 2018; Stefani & Högl, 2021). During rapid eye movement (REM) sleep, the brain is believed to prevent movement of the limbs, a survival mechanism to protect the individual from 'acting out' dreams (Jalal, Romanelli, et al., 2021).

Numerous pieces of research have supported the theory that SP is a REM-induced phenomenon, such as Hishikawa & Kaneko (1965) and Hishikawa et al. (1978). In these studies, polygraphic recordings indicated that SP occurs solely at "sleep onset rapid eye movement period" (SOREMP) – a period of REM sleep that occurs prematurely following sleep onset (Sharpless & Doghramji, 2015). Although both studies were performed utilising a purely narcoleptic sample of participants, it is widely believed that the same etiology is shared by non-narcoleptics (Denis et al., 2018; Sharpless, 2016; Stefani & Högl, 2021). In this respect, both SP in those with narcolepsy and those without are believed to occur when features of REM-sleep persists into the individual's waking state – essentially, the individual is believed to experience REM-sleep features, such as dreaming and paralysis, whilst completely conscious.

Although this explanation of SP was initially deemed sufficient by scholars within the field, such as Takeuchi et al. (1992) and Fukuda (1994), this explanation fails to explain why the positive sensations of dreaming do not appear within predominantly fearful appraisals of SP. Whilst the vast majority of SP episodes are associated with fear (Cheyne, Rueffer, et al., 1999), this contrasts with only 30% of dreams reported as frightening (Schredl & Doll, 1998). In one piece of research that sought to compare dream content with that of SP, Parker and Blackmore (2002) found that

interactions between dream characters are significantly more aggressive within SP, with participants frequently reporting that they were victims of physical aggression.

Enquiry in to the high levels of fear associated with SP point toward the role of the amygdala – a portion of the brain that is believed to play a central role in the experience (Cheyne, 2003; Jalal, 2018; Olunu et al., 2018). The somatic symptoms in conjunction with an individual's awareness of full bodily paralysis is believed to activate a host of psychological symptoms, such as fear and worry (Jalal, 2016). This in turn may generate an amygdaloid reaction, generating a panic-like response (Jalal, 2016). Attempting voluntary movement is believed to exacerbate symptoms, such as deep breathing, where resistance is thought to promote feelings of suffocation (Hishikawa & Shimizu, 1995). Essentially, the scientific explanation posits that when normal characteristics of REM-sleep are experienced during wake, amygdaloid activation or the "fight-flight" response, is thought to feed into the terrifying nature of the experience. To the best of the researcher's knowledge, this theory remains uncontested.

Antecedents

As the biomedical model embraces reductionism, such 'conditions' tend to be attributed to the deviation from normal somatic variables (Lyons & Chamberlain, 2006). Researchers have long believed that parasomnias are the result of multiple interacting factors that disrupt the orderly progression of rapid eye movement (REM) and non-rapid eye movement (NREM) sleep stages (Alkaabi et al., 2018; Denis, 2018; Denis et al., 2015; Olunu et al., 2018). Such disruption of normal sleep processes is thought to be mediated by a variety of primary causes, as will be discussed further within this section.

Poor Sleep Quality

During each sleep cycle, the human body is understood to cycle through two sleep phases, broadly categorised as REM and NREM (Patel et al., 2021). When an individual experiences lifestyle factors, such as sleep deprivation or stress, these factors are thought to disrupt this orderly progression resulting in "rebound sleep" – an increase in REM sleep, NREM sleep or both (Conesa, 2000; Feriante & Singh, 2020). Current literature suggests that REM-rebound, due to sleep deprivation, is the most potent risk factor which is consistently shown to relate to the onset of SP episodes (Denis et al., 2015; Denis & Poerio, 2017; Hsieh et al., 2010; Ma et al., 2014b; Munezawa et al., 2011). In one piece of research by Takeuchi and colleagues (1992), 16 participants were subjected to a nocturnal sleep-interruption schedule over four sleep cycles. Through systematically interrupting NREM-REM cycles in participants, the researchers successfully elicited six episodes of SP. By interrupting the normal progression of sleep stages and generating partial REM deprivation, the effects of rebound REM-sleep on subsequent nights were attributed to the manifestation of SP episodes. Despite this outcome, it should be noted that these rates of

SP were relatively low. Additionally, this study was conducted in a laboratory setting using arduous protocols, with a sample of 16 participants who already had a tendency toward SP.

Unusual sleep schedules, such as jet lag and shift work, are also commonly cited factors contributing to the onset of SP (Sharpless & Doghramji, 2015; Snyder, 1983). Takeuchi et al. (2002) found multiphasic sleep-wake schedules were associated with an increased rate of SP. Participants spent three consecutive nights in a sleep laboratory, in which the multi-phasic sleep-wake schedule (MPS) was implemented across two of the nights. During the MPS, sleep was interrupted for one-hour following the first completed NREM period. Following the first interruption, participants were awakened whenever five-minutes of REM sleep appeared and were presented with a variety of subjective measurements and performance tests. From 184 sleep interruptions, eight episodes of SP were successfully induced. Participants who reported SP were found to have a gradual decrease in performance levels and increased subjective sleepiness throughout the MPS. These findings suggested that individuals with a lower tolerance for sleep disruption may be more likely to experience SP when regular sleep schedules are affected. Despite such conclusions, this study was also conducted under highly controlled settings with a sample that reported a tendency toward SP. As rates of SP remained relatively low, even under rigorous circumstances, it is possible that alternative factors also contribute to the onset of SP among non-narcoleptic individuals.

SP and Psychopathology

Research suggests that rates of SP are elevated among individuals with existing psychopathology (Hinton, Pich, Chhean, Pollack, et al., 2005; Otto et al., 2006; Paradis & Friedman, 2005; Yeung et al., 2005). This has led some researchers, psychologists and medical professionals to consider SP to be an indicator of mental illness (Parker & Blackmore, 2002; Solomonova et al., 2008).

SP has been widely associated with panic disorder (PD) (Sharpless & Doghramji, 2015; Solomonova et al., 2008). However, despite the association between panic symptomatology and SP, findings have produced mixed results. For example, four studies found higher rates of SP among those with panic disorder (Bell et al., 1986; Neal-Barnett & Crowther, 2000; Ramsawh et al., 2008; Yeung et al., 2005) whereas two failed to do so (Ohayon et al., 1999; Otto et al., 2006). Due to the methodological differences between the four studies, the precise nature of the association remains ambiguous. Bell et al. (1986) used a broader definition of PD relative to the other three, thereby including in their analyses participants with panic symptoms who did not necessarily meet diagnostic threshold for PD. Additionally, research by Neal-Barnett and Crowther (2000), Ramsawh et al. (2008) and Yeung et al. (2005) all utilised specific participant criteria exclusively constituted of minority samples – thus, these participant characteristics may limit generalisability among a more diversified sample.

Of the many psychiatric disorders, post-traumatic stress disorder (PTSD) and trauma histories have been investigated the most thoroughly and are considered to possess the strongest evidence base in relation to SP (Denis et al., 2015; Ohayon & Shapiro, 2000; Sharpless et al., 2010; Young et al., 2013). Traumatic events have been reported to impact upon the content of multi-sensorial perceptions that often accompany SP. Hudson et al. (1991) reported a case in which a woman was abducted and tortured for several days. Following her traumatic experience, the content of her SP episodes were found to reflect her specific trauma history. In a later study by Hinton, Pich, Chhean and Pollack (2005), Cambodian refugees with a pre-existing diagnosis of PTSD not only experienced higher rates and more frequent SP, but also that the imagery content within episodes reflected their specific trauma histories. In addition, the content experienced by these individuals were found to elicit additional traumatic memories and, in some cases, survival guilt.

Although psychosis has been discussed in the context of SP, there is currently no findings indicating that psychosis serves as a risk factor for the experience. Despite the absence of evidence, Plante and Winkleman (2008) noted that psychosis may be associated with higher rates of HH's. Rather than a predisposing factor, symptoms of psychotic disorders appear related to SP due to their similar phenomenology. Numerous authors have commented that differentiating SP from a schizophrenia diagnosis can be a complex task due to their similar presentations, especially when hallucinations and panic predominate (Douglass et al., 1991; Douglass et al., 1993; Shapiro & Spitz, 1976; Takeuchi et al., 2000; Wilcox, 1985).

In summary, although psychopathology is consistently portrayed to show etiological relevance, the relationship between various disorders and SP appears ambiguous. There remains an open debate to whether SP episodes are caused by psychopathological processes, or instead, indirectly mediated through associated consequences (Sharpless & Doghramji, 2015). For example, most psychological disorders can result in widely recognised risk factors for SP, including sleep deprivation and sleep disruptions thus making instances of SP more likely (Sharpless & Doghramji, 2015). Considering the abundance of SP reports within non-psychiatric populations (Cheyne, Newby-Clark, et al., 1999; Fukuda et al., 2000; Jalal & Hinton, 2013; Wing et al., 1999), it is plausible that the elevated rates of SP within certain psychiatric groups (such as PD and PTSD) are due to the impacts these disorders have upon normal sleep processes.

Clinical Management

In regards to modern medical interventions for SP, there currently exists no established treatment methods (Sharpless & Grom, 2016; Solomonova, 2018). Rather, the modern biomedical approach involves treating comorbidity by first identifying potential underlying conditions, so that the perceived root cause can be treated accordingly (Hinton, Pich, Chhean, & Pollack, 2005; Olunu et al., 2018; Solomonova, 2018). In the absence of comorbidity, a number of "conceptually neutral

recommendations" (p. 14) have emerged to address ISP, which are thought to be of benefit to experiencers regardless of cultural background (Solomonova, 2018).

Psychotherapeutic Interventions

If the patient suffers from SP in the absence of psychopathology, individuals are typically educated on the benign nature of episodes as understood within the biomedical perspective (Hinton, Pich, Chhean, & Pollack, 2005). Essentially, this involves educating the experiencer with facts such as the experience is transient, does not pose any 'real' danger and is shared by numerous individuals across the globe. As asserted by numerous authors, raising awareness of SP and associated symptoms may be the most crucial factor in reducing distress prior, during and following its occurrence (Otto et al., 2006; Solomonova, 2018). This technique is believed to offer a powerful tool for psychological distancing and provides reassurance that may have a positive clinical impact (Sharpless, 2016; Solomonova, 2018). While there is no evidence to indicate the efficacy of this intervention, it is plausible that this technique could provide comfort to the individual, which may reduce associated symptoms such as fear and anxiety.

As poor subjective sleep quality has been consistently related to the onset of SP (Denis & Poerio, 2017; Hsieh et al., 2010; Ma et al., 2014a; Munezawa et al., 2011; Munezawa et al., 2009), techniques to improve sleep quality may prove beneficial. Thus, sleep hygiene and treatment for insomnia have been suggested for the clinical management of SP (Attarian, 2010; Sharpless, 2016). Instructions on various sleep hygiene techniques are commonly advised by clinicians to improve sleep initiation and maintenance (Denis et al., 2018). These techniques typically involve instructing the individual to: sleep and wake at the same time each day, restrict the use of caffeine or alcohol prior to sleep in addition to other techniques listed in the insomnia treatment guide by Edinger and Carney (2014). While there exists no studies documenting the efficacy of sleep hygiene education specifically for SP, such intervention is believed to reduce feelings of powerlessness and promote a greater sense of agency (Sharpless & Doghramji, 2015).

Descriptions of the successful use of CBT techniques can be found within literature, such as through the works of Hinton and colleagues (Hinton, Pich, Chhean, & Pollack, 2005; Hinton, Pich, Chhean, Pollack, et al., 2005). Hinton et al. (2005) implemented techniques such as: working with individuals to create coherent narratives of their frightening SP episodes, psychoeducation regarding the nature of their SP experiences and reframing cognitions surrounding the event. Behavioural techniques, such as breathing retraining and muscle relaxation were also advised to address post-episodic distress and reduce autonomic arousal (Hinton, Pich, Chhean, & Pollack, 2005). Although anecdotal, Hinton, Pich, Chhean, Pollack, et al. (2005) comment on the success of their approach, stating "in our clinic, we have found education about SP and modifying related catastrophic cognitions, to be a very effective intervention" (p. 51). However, researchers' did not clarify how efficacy was measured, nor how this was defined. Thus, it is unclear whether determining CBT as an 'effective' intervention was in regard to a reduction in SP or a reduction in

the severity of symptoms. In addition, researchers worked with Cambodian refugees from the Khmer Rouge period where severe trauma histories were prevalent within their samples. In this respect, the CBT approach to SP was conducted specifically within the contexts of PTSD and a particular socio-cultural climate, therefore, findings may not be generalisable to the broader population of SP experiencers.

Ohaeri et al. (1992) demonstrated efficacy of various CBT principles, including psychoeducation, through the use of an intervention design. Patients were reassured that their supernatural attributions were common – beliefs that appeared significant within their sample of Nigerian participants. Additionally, patients were informed of the transient nature of SP, advised to remain calm during episodes and encouraged to perform breathing exercises nightly, prior to sleep. Despite these pieces of research demonstrating the success of CBT techniques and principles, there currently exists no randomised clinical trials of CBT specifically focused on SP. As outcome data for CBT for SP appears scarce, promising evidence indicates that CBT needs to be investigated further in relation to SP.

Psychopharmacological Interventions

Although a number of pharmacological options have been utilised to treat SP, these are often prescribed exclusively within the context of narcolepsy (Sharpless, 2016; Sharpless & Doghramji, 2015). Within this context, the most commonly utilised agents are tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRIs) – both of which are thought to suppress REM sleep thus, reduce the occurrence of SP (Guilleminault et al., 1976; Hishikawa et al., 1966; Sharpless, 2016). Although these pharmacological agents have both been reported as successful in the reduction of SP, one case reported by Koran and Raghavan (1993) led to an unexpected increase in SP following administration of the tetracyclic agent, maprotiline. Interestingly, the individual prescribed maprotiline within this study suffered from isolated SP, that is, SP in the absence of narcolepsy – suggesting that patients may respond differently to medication dependent on other pre-existing diagnoses. The lack of research into the efficacy of medication in non-narcoleptic patients with SP suggests clinicians should take a cautious approach when prescribing psychopharmacological options.

Although the above clinical management techniques appear promising, the proposed strategies may only be effective for those subscribing to a medical worldview. In this sense, whether they are “conceptually neutral recommendations” (Solomonova, 2018, p. 14) may be debated. In many cultures around the world, contemporary research indicates that SP is interpreted as a spiritual experience. In this context, a plethora of spiritual needs arise that may not be adequately acknowledged nor addressed by a paradigm that excludes spirituality. Chapter two will discuss different cultural frameworks applied to the phenomenon in addition to how these perspectives are perceived.

Chapter Two: Sleep Paralysis and Culture

Chapter two begins by illustrating a selection of cultural, spiritual and paranormal frameworks drawn upon by experiencers within contemporary society. Next, this chapter describes the importance of acknowledging non-medical frameworks within research and healthcare. Additionally, this chapter addresses the relevance of exploring SP within the local context, especially given the high diversity of Aotearoa New Zealand. Finally, this chapter will conclude with a summary of the literature and will provide an outline of the current project's research objectives.

Cultural Explanations

Despite the biomedical understandings of SP dominating modern Western secular societies and scholarship, the combination of paralysis accompanied by terrifying imagery often means that many prefer to draw from traditional, non-medical explanations (Sharpless, 2016). Even after learning of the neurological basis, adherence to cultural explanatory models remains preferred by many experiencers due to SP's subjective and peculiar nature (Jalal & Ramachandran, 2014). This may be due to the importance placed upon certain features within cultural frameworks, which may not be validated by biomedical perspectives, especially "hallucinations" (Sharpless, 2015). While cultural frameworks and beliefs are shown to shape the content of perceptual experiences during SP (Hinton, Pich, Chhean, Pollack, et al., 2005; Jalal, Romanelli, et al., 2021; Jalal, Sevde Eskici, et al., 2021; Jalal et al., 2014), each culture makes use of their own traditional terms and local references in order to understand and explain the experience (Jalal, Romanelli, et al., 2021).

David Hufford (1982) presented the Cultural Source Hypothesis (CSH) which provided a potential explanation for how perceptual content is shaped by prior cultural belief. According to the CSH, highly elaborated beliefs embedded within cultural narratives generates the associated imagery. That is, SP produces a state of consciousness which can be loaded with both cultural and personal belief, thus producing imagery that conforms to the experiencer's expectations. Therefore, although experiencer's may not know one another personally, they are "associated within a web of cultural conventions" that includes beliefs of which their reports appear to confirm (Hufford, 2005, p. 19). This is an important insight as it suggests in cultures where specific entities are endorsed, they will be directly experienced by the individual. In this respect, such interpretations may not only shape experiences of SP but also impact upon the levels of distress prior, during and following the experience – dependent on whether the interpretation of the perceived presence is positively or negatively elaborated upon within cultural narratives.

Although the phenomenological features of SP appear cross-culturally universal (Jalal & Hinton, 2013), thus believed to hold a neurophysiological basis, cultural explanations vary greatly. Research inquiring into contemporary understandings of SP indicate that spiritual or paranormal interpretations of SP are widely drawn upon by many cultures around the world. Due to the panic and confusion associated with paralysis, in addition to feelings of vulnerability and fear associated

with ‘intruder’ and ‘incubus’ experiences, explanations are typically sought to help individuals make sense of their experience (Davies, 2003; Jalal, 2016). Such explanations typically derive from sources close to the individual - such as their community and culture. While many cultural explanations do exist, ranging from demonic and ghostly visitation to attempted abduction by an extra-terrestrial life force, some of the more well-known are described below.

Newfoundland – “The Old Hag”

Robert C. Ness (1978) conducted his ethnographic study from 1973-1974, within a small village in the northeast coastal region of Newfoundland. The small community of 400 people were primarily comprised of second-generation immigrants from ‘west-country’ England – most of which re-located to Newfoundland in the late 19th century to exploit the fishing banks. Within this context, the experience was widely recognised as an attack of the “Old Hag” or “Ag Rog”, with even those not having experienced it themselves familiar with the labels. Victims of the attack reported suddenly awakening, paralysis and inability to speak which occurred shortly after falling asleep. In addition, experiencers commonly expressed maintaining an awareness of their surroundings, chest pressure and sensing a figure which sometimes took the form of a witch that may sit upon the chest.

In regard to etiology, Ness (1978) categorised the most commonly cited causes into three classes. The first and most common was that a person’s blood “stagnates” (p. 17). An individual was believed to be more prone to stagnation when sleeping on their back, or in the “supine” position. Secondly, the Old Hag was believed to most likely occur when a person was over-worked. Members of Ness’s study expressed “you works [sic] hard and your blood gets thin” while another reported, “back in those days everyone punished their bodies, didn’t sleep right or get the proper food” (p.17) – all of which was believed to precede the experience. Thirdly, older members of the community endorsed that the experience was a manifestation of witchcraft precipitated by another individual who harboured hostile feelings toward the victim. It must be noted that an attack of the Old Hag is not considered a sign of illness by members of this community, nor has lasting effects. The only treatment recommendation was to wake victims during an attack to prevent death.

Egypt – “The Jinn”

Research inquiring in to the rates and characteristics of SP have found that many from the Egyptian population endorse spiritual beliefs as an explanation (Jalal & Hinton, 2013; Jalal et al., 2014). Since the 1980s, Egyptians have experienced a rise in religious conservatism, with many Egyptians adopting Islamic faith and incorporating the attendant principles in to their worldview (Abdo, 2002). With its roots in Islamic tradition, many of the general population of Egypt attribute their SP to works of the “Jinn” – entities that take the form of invisible spirits, driven by either good or malicious intent (Abdel Haleem, 2008; Laughlin, 2015; Lim et al., 2015). As vulnerability to

Jinn affliction can increase as a result of character traits, such as low self-confidence, greed and sinfulness, common customs to decrease vulnerability typically involve recitation of religious texts to strengthen the spiritual immune system (īmān) (Al-Ashqar, 2003; Galsgaard, 2021).

A cross-cultural study by Jalal et al. (2014), employing participants from both Egypt and Denmark found 48% of participants from the general population of Egypt attributed their SP to "Jinn assaults". Such interpretation appeared to impact the perceptual content experienced within SP, where 56% of participants adhering to this view reported feeling the presence of the Jinn – an entity which commonly takes an invisible form. Not only did pre-existing religious belief appear to impact the phenomenology of SP, but also prompted culturally-specific responses among participants. For instance, 95% of participants adhering to this view reported reciting verses they had memorised from the Qur'an during SP as both a form of protection and prevention. Following episodes, 26% of participants consulted a local priest for advice regarding their experience to which many were advised to perform five daily prayers to prevent future assaults.

Japan – "Kanashibari"

The cultural term, "Kanashibari" is commonly used to reference the experience in Japan - directly translated to "the state of being totally bound, as if constrained by metal chains" (De Sa & Mota-Rolim, 2016, p. 5). According to the cultural narrative of Kanashibari, there is no single spiritual entity attributed to the phenomenon – however, some scholars believe it refers to the magic of Buddhist God, Fudoh-Myohoh (Fukuda et al., 1987; Olry & Haines, 2014). Essentially, the term is widely believed to refer to the specific type of paralysis a person experiences when spirits attempt to visit or communicate with the individual (Yoshimura, 2015).

In an ethnographic, historical and experiential account of Kanashibari, Ayo Yoshimura (2015) comments on the dichotomy of scientific and spiritual frameworks available to the Japanese. In regard to etiology, two major frameworks exist within Japanese culture: a scientific framework where the experience is preceded by stress, fatigue or caused by a sleep disorder; and a supernatural framework where the experience is symbolic of spiritual visitation, often of an unpleasant or malevolent kind. With the experiencer presented with two contradictory explanations, Yoshimura (2015) asserted the Japanese are "likely to struggle to make sense" (p. 147) of the experience. Techniques used to disrupt or prevent Kanashibari are unidentifiable within the literature, however, they are likely to be a mixture of both biomedical and spiritual approaches.

Alien Abduction

Culture-specific presentations exist in all cultures, including Western (Gangdev, 2006). Although beliefs in spiritual entities are thought to have fewer believers within the West, the alien abduction explanatory framework is no different from the supernatural nature of the "Old Hag" or

"The Jinn" narratives (Jalal & Hinton, 2015; Ness, 1978). SP appears very salient within alien abduction discourse due to its similar phenomenology (Clancy et al., 2002; Hinton, Hufford, et al., 2005; Hufford, 2005; Spanos et al., 1993; Vyse, 2005; Yeung et al., 2005). Essentially, it is widely believed that the alien abduction narrative is another example of a cultural explanatory framework applied to the seemingly universal experience of SP.

In 1992, the results of a national Roper Poll led researchers to estimate that almost four-million Americans had claimed alien-abduction (Mack et al., 1992). Upon closer analysis, it was found that 1.4% did not endorse abduction directly, but endorsed "indicator" signs of abduction that paralleled SP. These indicator signs typically include: waking up paralysed, sensing a presence, hearing noises such as buzzing, rustling and footsteps, which is often accompanied by fear or terror (Blackmore, 1998; Cheyne & Girard, 2007; Spanos et al., 1993; Vyse, 2005). Numerous scholars, such as Wright (1994) and Spanos et al. (1993), have noted the similarities between these phenomenological features and alien abduction experiences. For instance, Spanos and colleagues (1993) recruited a participant sample who had reported UFO experiences. Participants were divided into two groups: non-intense (seeing lights and shapes in the sky) and intense (seeing and communicating with aliens). Not only did the large majority of UFO experiences occur at night, but 60% of the "intense" UFO reports were related to sleep.

Similar to the works of Spanos and colleagues (1993), Blackmore (1998) published an article entitled "Abduction by Aliens or Sleep Paralysis?", in which she too challenged the controversial Roper Poll results. Blackmore asserted that due to the similarity of reported symptoms (i.e. out-of-body experience, luminous presence, hallucinations), alien-abduction stories are just another example of a culture-specific narrative explaining SP. Survey results also highlighted that perceptions of aliens and abductions were greatly influenced by mass-media portrayals **(cite)**. Essentially, it is possible to understand how such experiences may be interpreted as abduction if one is primed with pre-existing beliefs. Whereas dominant historical explanations of SP were influenced by religion, such as attributed to demonic entities, "21st century Westerners may find technologically advanced extra-terrestrials to be more palatable and compelling causal agents" (Sharpless & Doghramji, 2015, p. 38).

Acknowledgement of Cultural Frameworks within Research

Fukuda (1993) was the first researcher to propose that the wide discrepancy in prevalence rates of SP is partially due to the descriptions used in each questionnaire. For instance, work by Goode (1962) suggested much lower prevalence (i.e. 4.7% to 26.2%) relative to works by Ness (1978) (i.e. 62.3%). Fukuda noted that the studies yielding higher percentages, the phenomenon was well known in folklore (i.e. referring to the phenomena as the "Old Hag" or "Kanashibari" within the questionnaire) (Fukuda et al., 1987; Ness, 1978). Whereas studies yielding lower percentages, such as by Goode (1962), Everett (1963) and Penn et al. (1981), participants were provided with a medical description of SP. For instance, Goode (1962) used the term "transient

paralysis" in their study which was defined by a "complete or partial loss of function" - making no reference to an associated presence, which often accompanies the phenomenon.

To investigate the effects of terminology used within questionnaires and the impacts phrasing has upon prevalence rates of SP, Fukuda (1993) tested whether certain descriptors would elicit more affirmative responses than others. To explore his hypothesis, three slightly varied questionaries were provided to three groups of healthy young adults in Japan. Each questionnaire contained alternative descriptors to define the symptom of immobility, including: "transient paralysis", "Kanashibari" and an unspecified "condition". Affirmative responses were ascertained from their respective groups at the following percentages: "transient paralysis" (26.4%), the unnamed "condition" (31.0%) and "Kanashibari" (39.3%). Although Fukuda (1993) did not discuss their results in depth, numerous insights may be inferred. One inference is that using familiar and culture specific vernacular is crucial for respondents to both recognise and report their experience. In addition, the connotations associated with the biomedical descriptor of symptoms (i.e. "transient paralysis" which implies serious pathology) may suppress report rates (Cheyne, Newby-Clark, et al., 1999).

Although various explanations have been proposed for the wide disparity in lifetime prevalence between studies, the "salience hypothesis" by Spanos et al. (1995) has garnered the most attention within the scholarship of SP. The hypothesis posits that SP is reported more frequently among cultures that have shared categories for classifying the phenomenon. In this regard, when individuals can place their experience into a highly elaborated cultural models (such as *Kanashibari* in Japan), SP is understood to take on greater salience thus making reports are more likely. Such hypothesis is also thought to explain why SP is consistently found to be least common in Caucasian majority populations (Bell et al., 1984; Jalal & Hinton, 2013; Sharpless & Barber, 2011). One proposed explanation is that within these populations, such as Denmark, SP is regarded as an idiosyncratic event where members of the cultural group rarely discuss and often are unfamiliar with SP (Jalal & Hinton, 2013). Rather than individuals interpreting the event as an opportunity for severe spiritual harm, individuals located within Western worldviews are encouraged to understand SP as precipitated by benign and physiological mechanisms thus, place less significance upon the experience. For this reason, SP may be more likely to go unnoticed, decreasing the likelihood of reports.

Cultural Beliefs and Clinical Implications

An acknowledgement of varying interpretative frameworks is also important in terms of the clinical implications. Within numerous cultures, the fear prior and following episodes is embedded within traditional explanatory models of SP that associate SP with malevolent night spirits or entities (De Jong, 2005; Hinton, Pich, Chhean, Pollack, et al., 2005). More so, individuals who adhere to culturally-specific beliefs regarding its causes have been seen to experience elevated levels of distress both during and following episodes relative to those who have lesser or

no spiritual beliefs surrounding SP (Cheyne & Pennycook, 2013a; Hinton, Pich, Chhean, & Pollack, 2005; Hufford, 2005; Jalal & Hinton, 2013).

Prominent researcher within the field, Baland Jalal, proposed the panic-hallucination (PH) model which highlights the role of culture in episodes of SP (Jalal, 2016). According to the model, fear embedded within traditional narratives of malevolent entities is believed to generate a panic-like response at the onset of an episode (Jalal, Romanelli, et al., 2021). As this causes the sleeper to struggle against the paralysis, resistance is believed to exacerbate somatic symptoms (i.e. chest pressure, bodily tightness, limb spasms) (Cheyne, Rueffer, et al., 1999; Jalal, 2016; Jalal, Romanelli, et al., 2021). This hypervigilant state coupled with unpleasant somatic sensations is believed to trigger perceptual content, resulting in highly disturbing visual, auditory and tactile experiences. This set of intensified symptoms, sometimes referred to as "terrorised immobility" (Jalal & Hinton, 2013, p. 543), is believed to serve as a trauma cue that sometimes results in conditioned fear of the experience. With conditioned fear predisposing individuals to more night-time awakenings and thus, poor sleep quality, this model may explain the higher frequency of SP within communities where spiritual explanations predominate (Jalal, 2016).

In addition to elevated levels of fear, numerous examples of cross-cultural research have revealed that individuals from Italy, Cambodia and Egypt, all tend to report longer duration of immobility (Hinton, Hufford, et al., 2005; Hinton, Pich, Chhean, & Pollack, 2005; Hinton, Pich, Chhean, Pollack, et al., 2005; Jalal & Hinton, 2013; Jalal, Romanelli, et al., 2021). Long duration of SP (5.2 minutes) as reported by Egyptians, has similarly been reported among Cambodian refugees (5.3 minutes), both of these samples elevated in comparison to the duration of SP as reported by Danish individuals (4.2 minutes) (Hinton, Hufford, et al., 2005; Hinton, Pich, Chhean, & Pollack, 2005; Hinton, Pich, Chhean, Pollack, et al., 2005; Jalal & Hinton, 2013). Despite these results, duration of SP were ascertained by merely asking participants' retrospective accounts. As individuals are prone to memory fallibility, it is difficult to know whether participants truly experienced prolonged episodes or whether these were exaggerated due to the strong emotional content. In addition, several pieces of cross-cultural research appear to be conducted by researchers outside of the cultural contexts of their participant sample (Jalal & Hinton, 2013; Jalal et al., 2015; Jalal, Sevde Eskici, et al., 2021; Ness, 1978). In this regard, it is unclear whether such findings were misinterpreted as a result of imposing concepts and methodologies derived from an external perspectives.

Sleep Paralysis as an "Anomalous Phenomenon"

For the majority of individuals, SP is considered a spiritual or supernatural experience whether rooted in cultural beliefs or produced empirically by the experience itself (Hufford, 2005). Although spirituality is largely absent from Western ontologies, spiritual interpretations of SP remain remarkably common even within urbanised, secular societies (Bloom & Gelardin, 1983; Hufford, 2005; Jalal et al., 2015).

As asserted by Hufford (2005), the stigma attached to anomalous phenomena like SP "represents attitudes toward 'visionary' experiences that have come to saturate modern Western culture" (p. 23). These attitudes have appeared to stem from post-enlightenment knowledge systems, such as that of science. The scientific paradigm, grounded heavily within a positivist tradition, means that all understanding of phenomena is akin to measuring (Smith, 2021). Attempts to rationalise such phenomena within the scientific paradigm have often reduced spiritual understanding to psychological or intellectual immaturity, illusion or psychopathology (Koenig, 2007). Such attitudes can be seen directly applied to the experience of SP, where early SP scholar Ernest Jones stated that "only those with less tutored minds, such as those of children and savages" face difficulties with distinguishing dreams from waking life (Jones, 1931, p. 12).

The widespread stigma attached to anomalous or spiritually interpreted phenomena makes disclosure of SP an increasingly daunting prospect for many. As a result, many individuals have been found to withhold spiritual elaborations of their SP episodes (Jalal et al., 2015; Jalal, Sevde Eskici, et al., 2021). In one study by Jalal et al. (2021), researchers asked whether Turkish university students had heard of a local name for SP, in which the vast majority (88%) mentioned the "Karabasan" – a spiritual creature embedded within Turkish folk tradition. Interestingly, although most participants referred to SP using this highly specific cultural reference, only 17% reported that their SP might have been caused by the creature. The authors proposed it is plausible many more believed the Karabasan was the cause of their SP but were perhaps too embarrassed to disclose these beliefs. In fact, substantially more participants utilised supernatural or religious prevention techniques, implying at least partial endorsement of spiritual causes. Essentially, due to the influence of secular and Western-style education within this context, it is possible that individuals withheld beliefs due to stigma and social expectations to adhere to scientific explanations.

In addition to withholding spiritual beliefs, individuals have also been found to internalise societal attitudes resulting in numerous reports of shame and embarrassment in the wake of episodes (Neal et al., 1994; Otto et al., 2006). Indeed, within their sample of urban African Americans with panic disorder (PD), Neal et al. (1994) found that seven individuals whom reported SP expressed embarrassment over their experience. Additionally, five of these individuals reported that the interviewer was the first person confided in regarding the experience, whilst the majority reported a preference toward more confidential traditional or religious cures. Findings such as those from Neal et al. (1994) are not uncommon, where the pathologisation of anomalous experiences can sometimes induce a "secondary trauma" (Rabeyron, 2022, p. 11) due to the negative perception that their experience has been reduced to a mental disorder (Evrard, 2007; Roxburgh & Evenden, 2016). In this respect, it is possible that lifetime prevalence of SP within Western, secular societies is much higher than research suggests. The apparent lower prevalence within these populations may rather be due to experiencers suppressing disclosure, due to their incompatibility with social norms.

A preference for non-medical treatment approaches is not uncommon, where many SP experiencers prefer confiding in herbalists, religious leaders and traditional priests (Hufford, 2005; Olunu et al., 2018; Sharpless & Grom, 2016). Various culture-bound practices, rooted in their respective cultural contexts, have been established to protect the sleeper from spiritual harm (Solomonova, 2018). For instance, the use of defensive objects on the sleeper or under the pillow, including knives, razors or ulus (a multi-purpose knife used within Inuit culture) have been widely reported across time and culture (Hufford, 1982; Law & Kirmayer, 2005). These objects are believed to ward off malevolent, spiritual entities responsible for SP and allow a means for self-defense. In addition, religious objects and rituals such as placing a bible underneath the pillow or ingesting holy water is also common practice by experiencers (Hufford, 1982; Ness, 1978; Ohaeri et al., 2004). For those subscribing to spiritual or religious models of SP, remedies or rituals involving the use of items offering spiritual protection are evidently deemed the most appropriate.

Increased Risks of Misdiagnosis

Interpretive differences between the experiencer and person diagnosing the experience can present numerous risks in regards to diagnosis, treatment and outcomes. Although evidence is largely anecdotal, the propensity of SP to be attributed to more severe levels of pathology can be considered the largest barrier preventing sufferers from reporting at medical institutions (Olunu et al., 2018; Parker & Blackmore, 2002; Powell & Nielsen, 1998; Solomonova et al., 2008). For instance, Parker & Blackmore (2002) commented that numerous experiencers reported confiding in doctors or therapists regarding SP and were either prescribed unnecessary medication or were made to feel abnormal. While spiritual experiences and psychotic symptoms have many aspects of form and content in common (Eeles et al., 2003), lack of clinical enquiry in to an individual's personal beliefs means that experiences can easily be misinterpreted by medical professionals (De Jong, 2005; Hinton, Hufford, et al., 2005). For instance, should an individual present complaining of ghostly visitations, without an awareness of alternative worldviews the clinician may mistakenly attribute the experience to delusion, and more severe levels of pathology.

Differential diagnosis of SP can be complicated by various psychotic experiences. Firstly, hypnagogic and hypnopompic hallucinations are more commonly found in psychotic disorders than other major groups of diagnoses (Plante & Winkelman, 2008). This may lead many clinicians to perceive these presentations as indicative of underlying mental illness. Additionally, despite no evidence of SP indicating or presaging psychosis, cases do exist where 'hallucinations' accompanying SP have led to misdiagnosis of the disorder (Cheyne & Pennycook, 2013a; Douglass, 2003; Powell & Nielsen, 1998; Shapiro & Spitz, 1976). Consultant psychiatrist, Prakash Gangdev, outlined a case of misdiagnosis involving a 25-year-old, Tswana-speaking woman (Gangdev, 2004). The patient presented to a medical institution in the United Kingdom with complaints of seeing strange creatures at night, who were described to sit upon her chest and smother her. The patient's distress was increased due to her inability to move or call for help, which led to sleep-

avoidance on subsequent nights. The patient reported no similar experiences in the daytime, no other sleep-related events and no pre-existing psychiatric issues. On examination, the patient attributed the experience to *tokoloshis* – spirits of ancestors, which were believed to be sent by her in-laws who wanted her dead. On preliminary assessment, the diagnosis of delusional disorder, psychotic disorder not otherwise specified and depression with psychotic features was considered.

Due to a general lack of research surrounding the experience of SP, misdiagnosis is likely a product of poor knowledge pertaining to the topic. With health providers not fully enquiring into patient symptoms, nor the patient's worldview (where spiritual interpretations may be considered normative), attributing symptoms to other more well-established psychopathological constructs are likely. Unfortunately, cases such as that illustrated above are not only unhelpful but may act to increase symptoms through the clinician's administration of inappropriate medication. For instance, antipsychotics for schizophrenia have been found to intensify symptoms of SP and/or narcolepsy (Szűcs et al., 2003). In this regard, correct diagnosis is paramount to reduce harm and may only be achieved through further research of the condition.

Implications for Aotearoa New Zealand

Aotearoa New Zealand is a multi-cultural nation with a diverse set of worldviews. Results of the most recently published census in 2018 revealed four major ethnic groups: European New Zealanders or Pākehā (70.2%), Māori (16.5%), Asian New Zealanders (15.1%), Pasifika (8.1%) while a small remainder of Middle Eastern, Latin American and African communities constitute the remaining 1.5% of the population (StatsNZ, 2019).

Given the diversity of ethnicities within our current context, it is plausible that a sizable proportion of the local population subscribe to spiritual models of SP. Māori, similar to the worldviews of many Indigenous people, endorse spiritual perspectives of the world that are believed to be interwoven into reality. Although there are very limited contemporary studies of how Māori interpret sleep-related phenomena, emergent research suggests Māori perspectives of sleep are closely intertwined with the spirit (Haami et al., 2023). In regard to beliefs held by Asian groups, overseas research by Wing et al. (1994) found that the large majority of Chinese participants referenced SP as "Ghost Oppression" – a Chinese, spiritual explanatory model applied to the experience. This cultural explanation for SP appears originating from a deeply spiritual worldview, in which Chinese people have long believed the soul is vulnerable to the influence of spirits during the sleep state (Liu, 1989, as cited in Wing et al., 1994). Whilst no research pertaining to the perspectives of SP by both Indian or Pasifika groups can be identified within the literature, prominent spiritual belief present within both cultures suggest they too are likely to ascribe explanations that diverge from Western understandings (Bhawuk, 2003; Fa'alogo-Lilo & Cartwright, 2021; Toso, 2011; Verghese, 2008). Thus, a one-size-fits-all approach to SP in which

largely neglects matters of the spirit is likely to ignore the spiritual issues and needs that may arise for many experiencers within the local context.

To illustrate possible interpretative differences, the following section describes te ao Māori perspectives relating to spirituality and sleep, which may have relevance to sleep-related phenomena such as SP.

Te Ao Māori, Wairua and Sleep

For many Indigenous communities, spirituality is deeply embedded within culture and everyday life. By providing a lens for understanding reality, Indigenous spirituality shapes the close relationship between the people, environment and the esoteric realm (Furbish & Reid, 2003; Valentine et al., 2017). Within te ao Māori, spirituality is considered to provide life with meaning and purpose, a concept that is best captured by the term *wairua* (Valentine et al., 2017). Within te ao Māori, there exists continuing dialogue between the past and present, where *tupūna* (ancestors) are understood to live on within the present (Binney, 1984). The spiritual essence of wairua is understood to infuse the past, present and future, with the metaphor of the *pito* (umbilical cord) representing the inseparable connection between these three domains (Timoti et al., 2017). Essentially, the spiritual essence of wairua is "as real as the tangible" and is considered a potent source of cultural strength that affirms Māori realities (Kennedy et al., 2015, p. 2).

Scientific perspectives of sleep diverge significantly from spiritual interpretations existent within te ao Māori. Although largely based upon historical reports of non-Indigenous settlers, numerous narratives describe Māori traditional thought surrounding the role of wairua during altered states of consciousness, such as sleep and death (Beattie, 1918; Best, 1922; Goldie, 1904). Altered states of consciousness are believed to enable the wairua to depart the material body and wander abroad to spiritual dimensions (Goldie, 1904). Due to the strong intuitive ability of "second sight" (Best, 1922, p. 180), it is within the sleep-state that the wairua can perceive impending danger, such as whether a *makutu* (curse) has been placed upon them (Best, 1922; Goldie, 1904). In addition, feedback from spiritual realms are considered of great importance as it provides the sleeper with important messages pertaining to the person or their community (Best, 1922; Goldie, 1904; Ngata, 2014).

Although typically described as *anomalous* or *exceptional* experiences within dominant literature, experiences akin to SP are considered normative by Māori and often referred to as *wairua experiences* (Lindsay et al., 2022; Lindsay et al., 2021). For instance, out-of-body experiences that often occur within experiences of SP are considered of spiritual origin by Māori (Goldie, 1904). Frequently experienced by Māori, such events serve as a central part of life, "enmeshed within the fabric of a wider spiritual reality" (Lindsay et al., 2022; Lindsay et al., 2021, p. 147; Valentine et al., 2017). Wairua experiences have also been conceptualised in terms of *matakite,* a cultural concept which embodies experiences such as foreseeing death, predicting

events and communicating with unseen presences. The term *matakite,* loosely translated to "seer of faces" (Lindsay et al., 2022, p. 77), refers to those who hold powerful abilities to see beyond the physical realm (Best, 1922; Ngata, 2014; NiaNia et al., 2019). Essentially, communication with *tupūna* and *kaitiaki* (spirit guides) have often been described by Māori as normative, common and ongoing throughout the lifetime (Mark & Lyons, 2010; Ngata, 2014; Taitimu et al., 2018). In this respect, when such cultural concepts are applied to the experience of SP, it seems they could provide an explanatory framework for several phenomenological features (i.e. visions, a "sensed presence", V-M sensations including out-of-body experiences).

Although *wairua experiences* or *matakite* are viewed as normative by Māori, such experiences are often assumed to be abnormal or indicative of pathology within Western paradigms. Clinical settings, as influenced by a Western biomedical perspective of health and illness, means that spiritual/cultural constructions are vulnerable to misinterpretation. As a result, Māori are found to withhold spiritual interpretations due to fears they will be ignored, marginalised or misdiagnosed (Lapsley et al., 2002; Lyndon, 1983; Taitimu et al., 2018). Essentially, while some Māori experiencers may interpret their SP as a *wairua experience*, or in terms of *matakite*, it is likely many would not share this interpretation nor disclose their attendant spiritual concerns with a clinician. In this regard, interpretive differences between healthcare systems and Māori may partially explain the scarcity of New Zealand specific literature pertaining to Indigenous perspectives of SP. As Māori do not feel culturally safe discussing spiritual constructions with clinicians, these are not likely to be reported and acknowledged as a concern.

Summary and Research Objectives

From a historical standpoint, perspectives of SP have transformed substantially. Although Western societies once attributed the experience to demonic entities, SP is now widely understood to be the result of underlying pathology, whether that be psychological or physiological. The current literature within the field of SP appears dominated by a biomedical view of the phenomenon. That is, a REM sleep-induced event that is precipitated by poor sleep quality or irregular sleep schedules. Proposed interventions seek to correct these variables either through sleep-hygiene or pharmacological approaches. In cases where the associated anxiety is considered salient, cognitive-behavioural approaches have been suggested.

Although less represented within the scholarship of SP, cultural studies have revealed a diverse array of spiritual interpretive models applied to the experience. Whether understood as "The Old Hag", "Kanashibari" or an assault of the "Jinn", the experience of SP appears heavily rooted within the cultural context of the individual. Scholars within the area, such as Ness (1978), have long advocated the need to document cross-cultural interpretation and distribution of the experience within different cultural settings. Although progress with evaluating cultural perspectives of the phenomenon has been made, such as through the works of Baland Jalal who has investigated SP in settings such as Egypt (Jalal & Hinton, 2013; Jalal et al., 2015; Jalal et al., 2014), Turkey (Jalal,

Sevde Eskici, et al., 2021) and Italy (Jalal et al., 2015; Jalal, Romanelli, et al., 2021), there currently exists no field research of SP within Aotearoa New Zealand.

As asserted by numerous scholars within the area, such as Yoshimura (2015) and Sharpless and Doghramji (2015), primary methods of SP research are quantitative. That is, the majority of scientific studies within the field depend largely on the distribution of surveys and questionnaries, followed by statistical analyses. Although such methodology is widely preferred due to both cost and time efficiency, "the experiencer's voices are muted" as participants are not provided with an opportunity to explain the ways in which they conceptualise SP (Yoshimura, 2015, p. 153). The current study therefore seeks to increase knowledge of SP within the culturally diverse society of Aotearoa New Zealand. Using a qualitative methodology, it aims to elucidate experiences and perspectives of SP that may be overlooked by quantitative approaches, which typically impose pre-conceived frameworks of meaning.

In consideration of the above, the main research questions explored within the current study include:

- What are the phenomenological characteristics of SP as experienced by Aotearoa New Zealanders?
- How do Aotearoa New Zealanders interpret experiences of SP?

Chapter Three: Method

This chapter addresses the epistemological perspective that informs the current project as well as ethical considerations. The recruitment process is described and the demographic information pertaining to the participant sample is presented. The method employed and an in-depth description of the analytic process is also outlined. Finally, important factors with regard to trustworthiness of the project are addressed, with examples provided to demonstrate how these were incorporated throughout the study.

Research Design and Philosophy

The current research project was informed by a phenomenological epistemology. As a theoretical perspective, the aims of phenomenological research seek to generate knowledge as to how individuals experience their inner world (Biber, 2016). Rather than the objective world, focus is centred upon how individuals understand and articulate the phenomenon of interest (Creswell & Poth, 2016; Daly, 2007; Rossman & Rallis, 2017). Research guided by this philosophy therefore prioritises first-hand, lived-experience in which an individual's perspectives and worldviews can be unveiled (Rossman & Rallis, 2017). As the study aimed to explore how individuals experience and interpret SP, a phenomenon that is understood in varying different ways contingent on personal belief systems and worldviews, the phenomenological approach was deemed in-line with these aims. Additionally, research grounded in this philosophy acknowledges how understanding of an experience can be influenced by contextual factors, such as history and culture, which is also relevant to this study (Shinebourne, 2011).

Ethics

A review and subsequent approval for the current project was acquired by the Massey University Human Ethics Committee: Southern A, Application SOA 22/17. To minimise risks of harm to those who may have become distressed by the interview process, participants were provided with a range of psychological support services available to them if required. No participants indicated utilisation of these services were necessary. Participants were also advised of their rights to withdraw from the interview at any time prior to the interview and to withdraw from the study up to two-weeks following completion of the interview. All participant names were anonymised using pseudonyms to preserve participant confidentiality. Cultural advice was sought from an internal cultural advisor to ensure respectful and mindful research with Māori.

Participants

Selection Criteria and Recruitment Process

To be eligible for participation, individuals had to be at least 16 years of age and hold the ability to give full informed and written consent. As the project sought to explore the experience

of SP and attendant interpretations from within the local context, participants had to reside within Aotearoa New Zealand to be eligible for participation. While eligibility criteria adhered to individuals experiencing SP on at least once occasion, an official diagnosis was not required. Although a diagnostic category for SP does exist, the propensity for SP to be attributed to more severe levels of pathology serves as a barrier preventing individuals from reporting to medical institutions (Olunu et al., 2018). Due to the stigma attached to experiences such as SP, it is likely that most SP experiencers will not have an official diagnosis. Additionally, dependent on the worldview that an individual draws upon to understand the experience, it was acknowledged that not all individuals conceptualise the experience as warranting medical intervention or diagnosis. Requiring the presence of an official diagnosis was considered exclusionary and therefore, not considered within the eligibility criteria. Finally, care was taken to recruit appropriate individuals for the current project. This was done by outlining some of the key phenomenological characteristics within the advertisement material, so that individuals could recognise the experience.

Unlike quantitative studies that employ larger samples which aim to generalise findings across populations, a smaller sample of twelve participants was sought to enable a richer and more detailed exploration of the phenomenon as shared by participants (Liamputtong & Ezzy, 2005). Adhering to principles of qualitative research, where effective sample sizes are more concerned with the ability of data to provide a rich and nuanced account of the phenomenon under study, smaller sample sizes are deemed the most effective (Hennink & Kaiser, 2021). As advised by Punch (2000), the method for participant selection should be integrated in to the general logic of any piece of research. The rationale for sample selection needs to be aligned with both the research aims and epistemological perspective that guides the study (Punch, 2000). Within qualitative research, smaller yet purposively selected samples are often employed to increase the depth (as opposed to breadth) of understanding (Huberman & Miles, 1994; Palinkas et al., 2015). More so, it is generally accepted within methodological literature that a smaller sample size, such as between six to twelve participants, is considered sufficient at reaching data saturation within in-depth qualitative inquiry (Guest et al., 2006; Hennink & Kaiser, 2022; Starks & Brown Trinidad, 2007).

Data saturation is the principle at which no new insights can be attained by increasing the sample size (Guest et al., 2006). The decision to cease collection was informed by redundancy signals, where it became apparent that no novel insights into the experience and interpretive frameworks could be gleaned. As saturation was achieved prior to the completion of the data collection phase, the participant sample was capped at twelve despite an excess of individuals expressing interest in participation. It was decided that sampling beyond the point of saturation would be an ineffective use of time and resources, with little added benefit gained by increasing the sample size.

Participants for the current project were recruited using purposive sampling. As opposed to the technique of randomised sampling, purposive sampling is based on the assumption that specific individuals may hold important perspectives and ideas related to the topic of interest (Mason, 2017; Robinson, 2014). As an exploratory piece of research, stratified purposive sampling was employed to capture major variations across the data, such as a diverse range of perspectives (Palinkas et al., 2015). A wide range of ethnicities representative of the general New Zealand population were purposively selected to enable exploration of how cultural frameworks may impact upon the beliefs attributed to the experience. This was of great importance to the research due to its general aims to investigate the diversity of worldviews that exist within the local context and how different belief-systems may shape experiences such as SP.

Seven out of the twelve participants were recruited using existing acquaintanceship networks connected to the primary researcher or supervising staff member. Additionally, two participants were recruited via snowball sampling through existing participants. The remaining three participants were recruited via social media (Instagram), where an individual well-known to the primary researcher placed an advertisement seeking voluntary participation from individuals who had experienced SP on at least one occasion (see Appendix A).

Participant Characteristics

The sample comprised of nine female and three male participants. The age range spanned from 22-47 years. Five participants were in their early 20's (20-23), four participants were in their mid-twenties (24-26) and two were in their late twenties (27-29). One participant was in their 40's. Four of the participants identified their ethnicity as New Zealand European. Two participants identified as Chinese. Two participants identified as Māori. Two participants identified as multi-ethnic with one identifying as Māori, Cook Island and European and the other identifying as Cook Island and Māori. One participant identified as New Zealand Indian. One participant identified as South African.

Participants were based across varying regions within the North Island of Aotearoa New Zealand (see Table 1). Participants reported a variance in the frequency of their experiences with SP. While the majority of participants reported re-occurring experiences on multiple occasions, some participants mentioned very few instances or on solely one occasion. A system to categorise the frequency of SP experiences was created for the current study. Categories included: low (participant reports of 1-2 experiences), moderate (participant reports of 2-5 experiences) and high (participant reports of multiple, reoccurring experiences). While some individuals resonated with the biomedical, scientific conceptualization of SP, others drew upon spiritual frameworks to understand and explain their experiences – more detail on these varying interpretative frameworks will be presented in the results section of this thesis.

Table 1

Participant Demographics

Participant Name*	Gender	Age	Ethnicity	Location	Frequency of Experiences
Aadhya	Female	22	New Zealand Indian	Wellington	High
Noah	Male	22	New Zealand European	Auckland	High
Jerry	Male	29	South African	Auckland	High
Emma	Female	24	New Zealand European	Auckland	Moderate
Anahera	Female	25	Māori, Cook Islands, European	Manawatū	Moderate
Amelia	Female	23	New Zealand European	Auckland	High
Taia	Female	28	Māori	Manawatū	High
Charlotte	Female	23	New Zealand European	Wellington	Moderate
Henry	Male	24	Chinese	Auckland	Low
Aroha	Female	23	Māori	Taranaki	Moderate
Jaz	Female	47	Cook Islands, Māori	Tokoroa	Low
Lily	Female	26	Chinese	Auckland	Low

*Names have been changed for the purposes of participant confidentiality

Procedure

Following approval from the Massey ethics committee, all participants who had expressed interest in participating were contacted via email. The primary researcher assessed demographic details and eligibility criteria (such as age, ethnic background, frequency of SP) to ensure compatibility with the desired participant profile. As the study progressed, participant selection became more refined to ensure maximum variation. Once screened for eligibility, participants were provided the project's information sheet (see Appendix B) and formally invited to participate within the study. Participants were advised of their right to ask any questions or to clarify concerns they may have had in regard to the project. Once participants were considered well-informed, a consent form was emailed (see Appendix C) which was signed and returned via email or in-person, prior to the interview date. Participants were provided with a range of days and times in which the most suitable time could be selected for the interview. Interviews were arranged in-line with both

the primary researcher's and participants schedule (i.e., outside of work hours) at a time free of any potential interruptions.

Eight interviews were held and recorded online using Zoom. Participants who opted for the online option chose to do so due to convenience and time/cost restraints. Four face-to-face interviews were conducted with participants who resided locally to the primary researcher. Three interviews were held in private areas of public locations such as café's, parks and communal areas at The University of Auckland. One participant, well-known to the primary researcher, chose to conduct their interview at their home.

Eight interviews conducted online were recorded using the audio-record function on Zoom. Audio footage was then saved on the primary researcher's laptop and subsequently passcode-protected to ensure privacy. The remaining four interviews, conducted face-to-face, were voice recorded using a digital voice-recorder (Olympus VN-541PC). Audio footage was uploaded to the primary-researchers laptop and passcode-protected for privacy and confidentiality. The data collected from the interview was stored separately from identifying data, such as consent forms. Participants were assigned pseudonyms to anonymise their identities, with each member provided with the opportunity to choose their own names. Some participants expressed a preference for the primary researcher to make this decision, in which care was taken to assign names that appropriately reflected demographic information (such as ethnic background and age).

Interview Structure

In-depth interviewing is one of most suitable methods to collect data in phenomenological research. In order to understand the phenomenon of interest, the researcher does so through one-to-one transactions between themselves and their participants (Wojnar & Swanson, 2007). Through attentive listening creating a more nuanced representation of lived-realities, the method of in-depth interviewing enables exploration into insights and perspectives, facilitating understanding of personal meanings and essences of an experience (Mapp, 2008; Wojnar & Swanson, 2007).

All 12 interviews followed a semi-structured format in which participants were free to discuss how they interpreted their experience and which aspects of the experience they deemed most salient. A semi-structured interview approach may be chosen when there is significant objective knowledge pertaining to a phenomenon, but the subjective knowledge is lacking (McIntosh & Morse, 2015; Morse & Field, 1995). As subjective representation of SP experiences appears very limited within the scholarship of SP, semi-structured interviewing allowed for guided enquiry consistent with the topic of interest. Not only did this method allow for individuals to express themselves freely in response to open-ended questioning, the guided aspect allowed for discussion to remain consistent with the study's general focus (Brinkmann, 2014; Madill & Gough, 2008). Considering the exploratory nature of the study, where the study sought to understand how individual's make sense of their experience(s), a structured format would have been too rigid

thus limiting nuanced representations important to the study's aims (Brinkmann, 2014; Raworth et al., 2012). Additionally, an unstructured approach with no predefined questions or theoretical framework may have resulted in data that was too heterogenous, making the formation of thematic patterns difficult (Brinkmann, 2014; Zhang & Wildemuth, 2009).

In-line with the semi-structured interviewing method, data collection involved enquiring through open-ended questioning. These questions were subsequently followed up with probing questions to deeply explore how individual's made sense of their experience(s). A formalised list of questions (see Appendix D) was used to assist guided exploration into the topic under study. Examples of open-ended questions asked included: "Can you describe what occurred within your experience(s)?" and "Why do you think your experience(s) occurred at the time(s) it did?". While these questions served as a general guide, further questioning into the individual's experience varied widely, dependent upon the information shared by the individual. Interviews ranged from 30 to 72 minutes, producing an average interview length of 44 minutes.

Data Analysis

The interview recordings were manually transcribed by the primary researcher. Despite manual transcription proving less time-efficient than using transcription software, the decision to manually transcribe was considered an important process to facilitate familiarisation and immersion with the data. Following transcription, analysis was conducted using inductive thematic analysis (TA). TA as a flexible qualitative method is not tied to a specific epistemology and therefore, can be used across many different epistemological approaches (Braun & Clarke, 2006; Braun & Clarke, 2021).

Flexibility with TA requires the researcher to actively select theoretical assumptions that inform their use of the approach (Braun & Clarke, 2021). Essentially, as TA is not pre-packaged with theoretical assumptions (such as Grounded Theory), using TA in a way that suited the epistemological perspective and general aims was carefully considered. TA prioritises the search for patterned meaning within and across data (Braun & Clarke, 2006). The decision to use this approach was due to its compatibility with the epistemological stance of the current research, which also concerns itself with the meaning of an experience. Additionally, TA assumes the researcher can uncover meaning of phenomenon from the qualitative data provided by one-to-one interviews, thus it was considered a well-suited analytic method.

Although approaches to TA sit along a continuum (inductive to deductive), the current project utilised an inductive approach to data analysis, where the themes were generated inductively from the raw data (Boyatzis, 1998; Braun & Clarke, 2021). As an explorative piece of research, this approach was deemed the most suitable due to the scarcity of literature available within the local context. Therefore, an approach that seeks to build understanding of the phenomenon as grounded within the data, rather than a deductive approach where analysis is driven by pre-existing theory, was considered the most beneficial at this early stage.

Data was analysed following Braun and Clarke's (2006) six-phase approach. Description of each phase in addition to documented examples from the data are presented in further detail below:

Phase 1: Familiarisation with the Data

Common to all forms of qualitative analysis, the initial phase of analysis involved complete immersion within the data through the practice of reading and rereading textual data (Braun & Clarke, 2012). As each interview was manually transcribed by the primary researcher, initial engagement allowed for extensive time with each interview while subsequently listening to the audio recording. Once initial transcription was completed, data sets were re-read, with initial observations and ideas noted on a separate document. As suggested by Braun and Clarke (2012), questions to stimulate critical thought during this process include, "how does this participant make sense of their experience?" and "what assumptions do they make in interpreting their experience?" (p.61). Through using these questions as a guide, each transcript was annotated, with salient items of interest (such as meanings, ideas and patterns) noted. The practice of annotating each data set thus allowed for reading the data in an *active* way, avoiding surface level understanding and providing the data with meaning (Braun & Clarke, 2006, 2012). Through the active practice of familiarisation, this process allowed for preparation of phase two of the analytic process.

Phase 2: Generating Initial Codes

As informed by Braun and Clarke (2021), the coding process allows for deep exploration of the diversity and patterned meaning across the dataset. Rather than merely a process to reduce down the detail of data, the purpose of categorising data into succinct labels aims to capture items of analytic interest (Braun & Clarke, 2021). The coding of TA can be an inductive 'bottom up' approach, a deductive 'top down' approach or combination of both dependent on the extent to which theoretical perspectives drive the analysis (Braun & Clarke, 2006; Clarke & Braun, 2013). As there currently exists no available research concerned with the SP experience and attendant beliefs within Aotearoa New Zealand, there is an absence of an existing theoretical foundation. With this in mind, the decision to code inductively supported the generation of new understandings and knowledge as derived from the data.

Another decision revolves around the 'level' at which codes are generated, at a semantic or explicit level, or at a latent or interpretive level (Boyatzis, 1998). Essentially, semantic codes are considered descriptive and participant-driven whereas latent codes are more conceptual and researcher-driven (Braun & Clarke, 2021). At the beginning of the process, the coding was primarily conducted at a semantic level such as "Fear" and "Sleep Disturbance". This was due to the exploratory nature of the study and subsequent need to initially establish a consistent pattern of meaning across the data. However, as the coding process progressed, more latent codes guided

by deeper, contextual meaning became apparent. Underlying meanings, such as “Opposing a Spiritual Perspective”, was acknowledged as a perspective held by many. Although some individuals explicitly stated this view, others were more implicit in their communication that alluded to this perspective.

While reading through each transcript and their initial annotations, excerpts pertaining to the research question were organised within a code that sought to encapsulate the essence of meaning. An example of a code and relevant excerpts are presented in Table 2. As coding progressed (and when similar codes had been condensed into single codes), a final list of approximately 180 codes were taken to the next analytic phase.

Table 2

Initial Coding of Data

Initial Code	Excerpt
Fear	…I ran in to their room [parents] because I was scared. I was like, “oh my God, I can’t sleep in my room”
Sleep Disturbance	…because I had never experienced anything like that before, it did really disturb my sleep patterns

Phase 3: Constructing Themes

Following the second round of coding, the generation of themes began. Where codes are considered the “building blocks” of analysis, phase three involved organizing codes in to topic areas or “clusters of meaning” (Braun et al., 2019, p. 855). Essentially, the process of generating themes and subthemes (subcomponents of a theme), involved collapsing or clustering codes together that indicate a common feature to reflect a meaningful pattern within the data (Braun & Clarke, 2012). Unlike codes, which capture an analytically interesting idea within a particular segment of transcript, themes tend to be higher order meaning categories in which several codes may relate to. An example of the initial candidate themes and their attendant codes are presented in Table 3.

Table 3

Initial Candidate Themes

Theme	Code
A Spiritual Perspective	Spiritual Causation – Environment
	Spiritual Causation – Negative Energy
	A Spiritual Experience
	There's Nothing Wrong with Me
	Biomedical Treatment Approaches – Last Resort
	Important Messages
	A Preference for Spiritual Support
A Biomedical Perspective	Sleep-Related Causes
	Elevated Stress Levels
	An Absence of Meaning
	Opposing a Spiritual Perspective

Phase 4: Review of Themes

Once a set of candidate themes had been developed, phase four involved refinement of those themes. This stage involved two levels of review: reviewing the level of coded extracts and reviewing the validity of individual themes in relation to the entire data set (Braun & Clarke, 2012). Level one involved re-reading all excerpts grouped under each theme and required careful consideration as to whether they formed a coherent pattern. Through revision of the collated excerpts, it became apparent that some of the data extracts appeared too disconnected from the theme in which it was grouped. In this case, a 'theme' called 'miscellaneous' was developed to tentatively house codes that did not appear consistent with the candidate themes.

Throughout the revision phase some themes appeared too broad, so they were either separated in to two separate themes or re-worked entirely. For example, this included revision of the "Phenomenological Characteristics" theme – a theme that originally appeared too large and too complex for a singular theme. Following review, this 'theme' was adapted to become a "domain summary", a category of themes that share the same topic but not the same meaning

(Braun & Clarke, 2019). Within this domain summary, numerous themes that pertained to phenomenology of SP were placed (including fear, inability to move, restraint and physical touch and limited control). The remaining features of the original, candidate theme that appeared to not fit within this category were subsumed under alternative sections. Essentially, as themes were revised and organised, excerpts from the 'miscellaneous' category were also reincorporated into the analysis.

Phase 5: Definition of and Naming Themes

Once clear differences between ideas were established, a set of four domain summaries with approximately five themes (and relative subthemes) in each were finalised. Ensuring each theme had its own "central organising concept" and their own clear boundaries (avoiding overlap with other themes) was integral within this phase (Braun et al., 2019, p. 48). For example, this included definition of the theme "There's Nothing Wrong With Me", in which captured the central idea that for some participants, SP was not viewed as an indicator of physiological abnormality, nor seen as warranting treatment.

An important aspect within this phase was the naming of themes, providing informative and concise labels for each. As poorly named themes risk misrepresentation of the analysis, effort was made to ensure that each name signalled meaning and analytic direction (Braun & Clarke, 2021). The process of naming themes involved trial and error, where numerous labels required revision. This included the name "A Biomedical Perspective", a theme that sought to showcase the perspectives of individuals who viewed SP as a purely physical occurrence. As the original name lacked interpretation, appearing too descriptive, this was reviewed and subsequently changed to "Physical Abnormality". The same process was applied to the label "Opposing a Spiritual Perspective". Upon review, it became apparent that the essence of this theme was better captured by the label "A 'Logical' View" to highlight the perceived superiority of the scientific explanation of SP.

Phase 6: Producing the Report

Once all themes were revised, defined and organised into their relative domain summaries, phase six involved write-up of the final report. Quotes were embedded within an analytic narrative to compellingly illustrate the story told about the data. This was done through mindfully providing context to participant excerpts, to inform the reader of important information when interpreting results. The prevalence of each theme was demonstrated through presenting sufficient evidence, where enough data extracts were included to convey the salience of each idea. Essentially, the use of detailed and vivid excerpts was incorporated to convince interpretive audiences of the overall validity of the research. By doing so, readers are able to judge for themselves whether the themes generated by the researcher are sufficiently supported.

Additionally, it is integral that the analysis provides a coherent, concise and logical account of the story told by the data (Braun & Clarke, 2006). With this in mind, the experiential features of SP was presented first to inform the reader of how SP presents, before presenting the differences in how it was interpreted. Although the order of themes were purposefully organised, this was not based on a hierarchy of importance. Each of the presented themes were considered as salient as others, each representing equal importance of the participant experiences.

Finally, in some qualitative traditions the Results and Discussion sections are presented in combination, under the heading "Findings" (Levitt, 2020). Although this format is less common within disciplines such as psychology, this style appears congruent for research traditions in which results are conceptualised as interpretive in nature (Levitt, 2020). For the current study, both the Results and Discussion sections have been separated to distinguish the raw results from the primary researcher's subsequent analysis and interpretation. Essentially, this allows for interpretive audiences to decide for themselves whether the interpretive findings are an appropriate interpretation of the results.

Trustworthiness

Rigour refers to the quality of qualitative research and is used as a way of evaluating qualitative research (Liamputtong, 2020). The concept of rigour, commonly referred to by many qualitative researchers as *trustworthiness*, is the means by which the researcher demonstrates integrity, competence and legitimacy of the research process (Liamputtong, 2020; Tobin & Begley, 2004). Trustworthiness can be established by attending to a variety of factors, with the importance of these factors differing between authors. One crucial factor agreed upon by many qualitative researchers is the concept of reflexivity (Alvesson & Sköldberg, 2017; Hesse-Biber & Piatelli, 2012; Lincoln et al., 2011).

Reflexivity acknowledges that the researcher plays an integral role in regard to how data is shaped and analysed (Liamputtong, 2020). Unlike positivist research, which holds objectivity as desirable and achievable, qualitative research acknowledges that researchers bring their own positions and personal perspectives into the research process (Lincoln et al., 2011). By viewing the researcher as an active participant in knowledge creation, seeing this position as a "resource rather than a source of error or bias" (Sim & Wright, 2000, p. 134), reflexivity is a practice that enhances credibility through making such personal biases explicit (Alvesson & Sköldberg, 2017; Rossman & Rallis, 2017; Sim & Wright, 2000). Essentially, the researcher's own background, prejudices and ideology must be acknowledged (and continually reflected upon) to enhance the overall credibility of research.

In addition to reflexivity, a variety of other important factors establishing trustworthiness were integrated within the research process. Dependability acknowledges that the research process, through which findings are derived, should be made explicit (Morrow, 2005). Through

careful tracking of research processes (such as an in-depth descriptions of the design, participant selection and data analysis), the research should allow for audiences to critique and evaluate the validity of findings (Merrik, 1999; Morrow, 2005; Streubert-Speziale & Carpenter, 2007). Transferability conveys that the theoretical knowledge obtained from the study can be applied to other similar individuals, groups or situations (Carpenter & Suto, 2008; Padgett, 2016). Finally, confirmability pertains that findings are clearly linked to the data as opposed to the biases and interests of the researcher (Lincoln & Guba, 1985; Nowell et al., 2017; Tobin & Begley, 2004).

Reflexivity

The topic of the current study was investigated due to the primary researcher's lived experience of the phenomenon. Through regular consultation with her supervisor, personal perspectives of the phenomenon and ways to minimise bias were acknowledged. This included on-going discussion regarding the primary researcher's position as a female of mixed heritage, with Māori ancestry, educated within a scientific discipline. While impossible to eliminate these contextual influences, discussing taken-for-granted assumptions as derived from this perspective proved a crucial tool within the research process. Through an understanding that not all participants share the same positioning, factors such as how interviewing questions were framed and the assumptions certain vocabulary may convey were carefully considered. This included use of biomedical terms, such as "hallucination", enquiry in to "treatment" approaches and even the label "sleep paralysis" itself. While these terms and types of questions may resonate with the dominant Western, secular view of the experience, it was quickly acknowledged that not all participants may resonate with this framing. To rectify this potential bias, using these terms were avoided unless explicitly stated by the interviewee during the interview process.

As advised by Braun and Clarke (2021), a reflexive journal is crucial for qualitative research. Therefore, an additional tool to promote reflexivity involved the documentation of personal thoughts and perspectives that was kept throughout the research process. Not only did this facilitate on-going reflection throughout the study, tracking key thoughts and concerns allowed for crucial discussion points which were interrogated further within supervision meetings.

Dependability

Each step of the research process, as well as the epistemological perspective that informed the project, has been made explicit. Each step of the analytic phase has been thoroughly described, with examples provided. Careful tracking of each research phase aimed to allow for interpretive audiences to evaluate the credibility of research and enhance overall transparency.

Transferability

The current project purposively selected an ethnically diverse sample, representative of the diversity that comprises the population of Aotearoa New Zealand. As beliefs and meanings

attributed to the experience are significantly influenced by contextual factors, such as culture, the inclusivity of various backgrounds sought to enhance the transferability of findings to the broader local context. Although further research would be required to ensure findings are generalisable, the diversity of the sample employed hoped to provide an insight into the various perspectives that may present within Aotearoa New Zealand.

Confirmability

Background descriptions are provided for each theme and sub-theme, as well as participants (demographic characteristics such as age, gender, ethnicity), enabling the reader to locate the supporting participant quotes in context. Extended and detailed excerpts from participant accounts were provided. Audiences are therefore able to make their own decisions as to whether findings are clearly linked to the data.

Chapter Four: Results

The following chapter consists of four domain summaries, with themes and subthemes presented under each domain. The first domain summary presents the phenomenological features of the experience as reported by participants. The second encompasses the interpretive frameworks drawn upon by experiencers to both understand and explain their experience(s) of SP. The third relates to preferred support networks and factors associated with confiding in others. The final domain summary presents common responses and strategies utilised by participants to manage their experience(s). Extracts from narrative accounts are provided. The gender and age of participants are presented in parentheses after the name to enable the reader to place the quote into context.

Phenomenological Characteristics

The first domain summary categorises subjective features of the experience as reported by participants. Themes that comprise this section include fear, a presence (the identity of and levels of interaction with the associated presence), physical sensations, limited control, sense of realism and confusion. Each theme and associated subthemes are presented in further detail below.

Fear

Participants used words such as “scary”, “afraid” and “terrifying” in addition to phrases such as “freak out” to describe their experience(s). Aroha (female, 23) expressed her initial thoughts following her first encounter with SP. While staying at a friend’s house, she was approached by what she described as a “dark figure” that progressed to violently push her into the mattress. What felt like the “full weight of a person” pushing onto her chest, she recounted her fearful response:

> …It was just like, a very powerful and scary presence. So I think afterwards, I was like “why was it so aggressive?” and “why was it such a dark feeling?”. I had never experienced a time or anything like that where I had felt such a strong and scary kind of presence. (Aroha, female, 23)

Many participants mentioned that their initial experience(s) of SP elicited more fear than subsequent experience(s). The novelty of the experience contributed to heightened levels of fear for many participants, as claimed by Jaz (female, 47), “I didn’t really know how to feel because it had never happened to me before, that I can remember. Yeah, first I felt probably like my cousin did, I felt afraid”. Similar to Jaz, Aadhya (female, 22) also commented on the distress she felt during her initial experience of SP. Despite an initial fear of the unknown, Aadhya subsequently placed her experience into a spiritual framework that helped to aid her understanding and reduce the associated fear:

> …Like, I was distressed at first because obviously it was novel and I didn't know what to do with it or what it could mean for me. I think that over time I kind of understood that it's just maybe something to do with another spiritual realm, which someone may be doing on me, which I'm not aware of. If I just kind of hold on to my faith and keep that with me, I don't think it will impact me as much. So yeah, that kind of understanding doesn't really cause distress anymore. Now I'm like okay, it that's happening, just let it be. (Aadhya, female, 22)

Charlotte (female, 23) felt afraid during her initial instances of SP, however, familiarity with the experience appeared to reduce fear within subsequent experiences:

> …When the experience happened like, the third time and I felt like I was out of control, I think I was able to remind myself more easily that it was just a dream and that I'm in control of this. I can get it to stop, I felt less afraid. (Charlotte, female, 23)

Although fear was the most prominent affective response, others reported stress, anxiety, panic and annoyance. One experience contrasting with commonly reported negative affect was by Taia (female, 28), who reported an experience eliciting a positive emotional response. When viewing the experience as a time of connection with her late grandmother, Taia expressed her sense of comfort:

> …In my most recent one, it felt like my nan. That one actually happened during Covid and I was going through a bit of a tough time. I think a lot of us were during Covid. It was the first time that the experience actually felt comforting, not scary. (Taia, female, 28)

A Presence

Most participants described an accompanying presence or figure that appeared to take varying different forms. Although sometimes identification of this presence appeared ambiguous, such as the common description of a "shadow figure", other instances showed that the presence took a recognisable form such as a creature, animal or family member. The majority of participants described the figure within their experience(s) of SP as a "dark shadow", a "silhouette" or as having a transparent appearance:

> …I see kind of like this shadow, like this dark shadow. I couldn't make it out if it was a man or a woman, like it was just genderless and like this shadow. It had no face or anything but like, I could sense something there. (Aadhya, female, 22)

> …I felt like something came over me, like a dark shadow. I can't make out if it had any type of features or anything like that, or anything that was defined that I could picture what it possibly could have been. (Jaz, female, 47)

Some participants described the figure as non-human, whether this took the form of an insect, animal, monster, spirit or entity. As expressed by Charlotte (female, 23), she claimed "there's been another couple of occasions where I've opened my eyes and a large spider like, falls onto my face. I'm like "ahhh!" and I can't move until after it's happened". Amelia (female, 23) also recognised the figure as non-human in appearance, in which she expressed:

> …I called it like the "Tickle Monster", so like, whatever the figure was in my dream or what I perceived to be in my room would come over to me and tickle me as a kid. So I labelled it the "Tickle Monster" at the time. I would manage to wake myself up but I'd wake up sore, like someone had almost grabbed me and tickled me horribly on my stomach or under my arms. (Amelia, female, 23)

Some participants recognised the figure as a loved-one such as a family-member, a partner or a late-relative. For Emma (female, 24), the presence was recognised as her current partner. She claimed, "there was another time of sleep paralysis and it felt like, like [partner] was behind me. I thought it was [partner] behind me, like he was spooning me or something like that". Similar to Emma, Taia (female, 28) also recognised the presence as a prominent figure in her life. Assigning the identity of the figure to her grandmother that had passed years prior, Taia expressed her positive and comforting experience of SP. She stated, "it felt like, I'm pretty sure it was my nan, like I was being hugged and held and I couldn't move but it felt like I was being told it was all right" (Taia, female, 28).

The majority of participants were able to describe the appearance of the figure, suggesting the presence was experienced at a visual level. However, some participants commented that they could hear the presence, hearing sounds such as 'screeching' or speech within an unidentifiable language. Aadhya (female, 22) expressed the auditory content that accompanied her experience of SP, in which she stated, "when I tried to push it away, it made this really weird like screeching sound, almost like, I don't know, like the monsters you see". Anahera (female, 25) also recounted what she had heard during an instance of SP:

> …I woke up in my bed and could hear someone talking, I thought it was my dad. Actually, when I listened a bit more, it was a male talking and it wasn't talking in the same language. It wasn't talking in English. (Anahera, female, 25)

Physical Sensations

A diversity of physical sensations were reported by participants ranging from perceived breathing abnormalities to generalised bodily pressure, however, three prominent features appeared the most consistent across the dataset: *Inability to Move, Restraint and Physical Touch.* These themes are described in further detail below:

Inability to Move.

All participants reported an inability to move their physical body during their experience(s), using words such as “frozen”, “paralysed” and phrases pertaining to restricted movement:

> …I was putting all of my pressure into it and you know, trying to get a voice to come out but nothing was working. I did feel like I was paralysed and I didn’t want to be in that state. (Aadhya, female, 22)

> …Well, there is another time actually, in this room where I was just falling asleep. Next minute, like, you just couldn’t move. I was kind of like, “what? I’m awake but I can’t move”. I actually physically thought I was awake, I didn’t think I had fallen asleep. I just kind of, couldn’t move. (Jerry, male, 29)

Restraint.

Several participants described feelings of restraint, suggesting a highly interactive and realistic experience:

> …I remember I went into the bathroom because I went to check my neck. I wasn’t sure if I had marks on my neck and chest from being held down because that’s what it felt like, like someone was holding me down. (Aroha, female, 23)

> …It felt more like something was holding me rather than me not being able to move, if that makes sense. Just being constrained, more than anything. That’s quite normal for all of my sleep paralysis experiences. It’s either I can feel like a spirit or entity or something on me, holding me down, lying on top of me. That’s really consistent across all of my experiences. (Taia, female, 28)

Physical Touch.

For many participants, such as Jerry (male, 29), the element of physical touch was viewed as a salient part of the experience. He commented, “I think it’s more the interaction that you have with what you see. Like sometimes you can just see it and sometimes you can feel it. It makes it a bit more real when you can feel it”.

The majority of participants expressed perceptions of bodily pressure. Although commonly reported as localised chest pressure, some participants reported a more generalised feeling of pressure upon the entire body. Participants commonly described the perception of bodily pressure using descriptors such as ‘pressed’ and ‘pushed’. Taia (female, 28) stated, “I just felt myself being pressed and pressed and pressed and pressed down on, more and more and more”. Participants

often used repetition to express the salience of this feature, as also described by Jaz (female, 47), "it just felt like a heavy pressure on my chest like, pushing me down. Pushing me down".

Although shared by only one participant, an experience resemblant of violent, physical assault was also reported:

> …I had this one experience, actually in the room I'm in now. I was kind of just like, falling asleep and next minute my face is being pushed into my pillow. Someone was like choking me out. Like, it got on top of me and started hitting me. It kind of felt like assault. My face was being pushed into the pillow, I felt like I couldn't breathe. (Jerry, male, 29)

Limited Control

The next theme relates to the level of control participants perceived over their experience(s). The majority of participants alluded to a lack of control, whether this was over the physical body or over the general experience. Anahera (female, 25) expressed how a lack of control contributed to her sense of distress. She claimed, "I've had other times of sleep paralysis since that haven't been as distressing but still a little stressful in terms of not being in control, that sort of thing". This perspective was also shared by Emma (female, 24), who commented:

> …But in terms of control, like I knew I couldn't move my body or anything like that and I guess I felt less control in the experiences where it felt like someone was holding me down or that there was someone in the room. (Emma, female, 24)

Despite the limited sense of control as reported by several participants, many individuals commented that they remained cognisant with control over the mind remaining intact. Aroha (female, 23) recalled that despite the lack of control over her physical body, she was able to use her mind as a useful tool. She claimed, "I wasn't able to control my body physically but I still had my mind. I could still talk to myself, which helped me to eventually be able to move my body". Emma (female, 24) expressed how limited control over her body combined with the maintenance of cognitive function presented as a salient feature of her experience:

> …The feeling of not being able to move but being conscious, the first time I experienced it [sleep paralysis], that's what it was. That's what stayed the same the whole way through. Yeah, that's sort of what stuck out the most to me. (Emma, female, 24)

Sense of Realism

Numerous participants expressed their confusion surrounding their state of consciousness at the time of their experience(s). While some participants commented that the experience was relatable to a dream, many found it difficult to decipher whether they were awake – pointing toward the highly realistic nature of the experience. As expressed by Anahera (female, 25), "it's

hard for me to decipher when I was awake and when I wasn't because it felt so real. Like everything was the same, if that makes sense?". A general sense of confusion was also shared by Jerry (male, 29) who stated, "I don't know, it's never really felt like a dream because your surroundings are still here. You know, it's not like you're in a completely different world. It's confusing".

The sense of realism was usually stated explicitly through descriptive words and phrases using the word "real" or "realistic". This was also stated implicitly, where individuals commented that following their experience, they would check their body or environment for evidence of an injury or a presence:

> …It was more realistic because I was actually scared. I feel like, if I knew it was a dream, I wouldn't be that scared. Like, to me, it just feels like I woke up in the night and I saw this figure. It's hard for me to differentiate it. So, I guess it's more close to reality. (Henry, male, 24)

> …I just turned my light on once I had fully woken up. I double checked my sheets, down the side of my bed, my pillows, underneath my bed and around my room just to make sure nothing was actually there. (Charlotte, female, 23)

For many individuals, although the experience appeared highly realistic, they were ultimately recognised as falsely created by the mind. Recognising the experience as "not real" worked as a coping-mechanism to reduce anxiety. By reassuring themselves that these perceptual experiences were not a true manifestation of real-life, such understanding reduced the threat and fear commonly associated with the experience. As expressed by Aroha (female, 23), "I knew like, straight away what to expect. I just kind of told myself, "it's not real". Like what I'm seeing, it's not real. Like, "don't freak out"". Some participants described the perceptual aspects of their experience(s) as *hallucinations*, referring to the false perception of objects or events involving the senses:

> …Some of the worst ones, I would actually more describe it as hallucinating as opposed to dreaming because when I dream, say like, a normal dream, I would be at home but it wouldn't be my house. It would be some random environment I'd never been to. (Noah, male, 22)

> …I think when I woke up, I was still hallucinating because I was still in my bed. I think I had hallucinated my mum coming in to my room and turning on the light, I was living with my parents at the time. So I think I had hallucinated my mum coming in to my room and putting clothes in my wardrobe but it seemed real. It was definitely something she would do, even if I was asleep. (Lily, female, 26)

For one participant, justifying the experience as a hallucination did not resonate with her interpretation of SP. As Taia (female, 28) interpreted the experience through a spiritual framework, reducing the experience to a brain process or 'hallucination' did not accurately capture her perception of the experience. Within Taia's perspective, the experience was seen as a very real and meaningful connection with the spiritual realm. Taia claimed that although it was recognised as a different state, "everything was definitely real. It's just because my wairua [spirit] came out to the forefront in that experience, my body took the backseat". Elaborating further, she stated her feelings of societal pressure to adhere to the dominant perspective:

> …Based on logic, on Western logic, it's "there's something going on in your brain that's causing all of this" and no, you know, "don't start ascribing it to a spiritual thing because that's not what it is. It's purely the brain and you're *hallucinating*" (Taia, female, 28)

Interpretations

In alignment with the current project's aims, exploration into the associated beliefs attributed to the experience were examined. In this regard, the second domain summary encompasses the interpretive frameworks used to understand the experience, as drawn upon by experiencers within the local context. Two salient perspectives, under two separate thematic categories, were identified: *Physiological Abnormality* and *A Spiritual Perspective.* Each are outlined in further detail below.

Physiological Abnormality

The first main theme and set of subthemes are related to perceptions, thoughts and feelings of those who conceptualised SP in terms of physiological abnormality. Approximately seven participants who adhered to this framework attributed their SP to factors such as poor sleep quality and elevated stress levels, viewing SP as purely physiological in nature. When viewing the experience in terms of bodily dysfunction, data suggested that these individuals understood the experience as one of limited meaning and purpose. Additionally, the majority of these participants communicated a perceived superiority of this framework, with many opposing alternative frameworks as a result.

Poor Sleep Quality.

One-third of the participant sample perceived their experiences to be precipitated by sleep-related causes. More specifically, participants generally believed that poor sleep quality, sleeping at an abnormal time or fatigue contributed to the manifestation of their experience(s), as expressed by Charlotte (female, 23). For Charlotte, the SP experience was perceived to be triggered by exhaustion and sleep deprivation. Rather than a consequence of SP, poor sleep quality was viewed as a prominent influence in the occurrence and re-occurrence of SP experiences:

> …I feel like my sleep in general is a bit like, all over the show. And so, I feel like I would have maybe had been having bad sleep already for sleep paralysis to occur. So, for me to have a bad sleep the following night may not necessarily be because of sleep paralysis, but because of sleeping badly in general. (Charlotte, female, 23)

Noah (male, 22) attributed his experiences of SP to sleeping at a time outside of his regular sleep-schedule. Following a string of SP experiences, Noah, recognised a pattern to when his experiences most often occurred:

> …It only ever happens if I go to sleep during the day because I'm not a napping person. Like, occasionally if I'm just like really tired or something, I'll just go and lie down at like, 1 or 2pm. It just happens instantly. (Noah, male, 22)

Four participants commented that fatigue may have contributed to the manifestation of SP, as expressed by Jerry (male, 29). For Jerry, his re-occurring experiences of SP were precipitated by late nights and subsequent sleep deprivation. He claimed, "it did happen a lot when I was quite sleep-deprived. Like, if I had late nights and I was super tired. That's when I would experience it the most". Lily (female, 26) also resonated with the idea that sleep deprivation may play a prominent role in the onset of her SP experiences, in which she commented, "…or sleep deprivation, I guess. Which for me, is often different because sometimes I don't necessarily feel sleep deprived but I've just been sleeping silly hours".

Stress.

Half of the participant sample commented on their elevated stress-levels at the time of occurrence. While some participants recounted significant life events surrounding the onset of SP, others commented more generally on the presence of high stress. Jerry (male, 29) recounted one occurrence of SP following the unexpected separation of his parents. At 16 years old, Jerry recalled feelings of anger and confusion surrounding the time of his SP experience:

> …my parents did just kind of split up through that period. So maybe I was going through a lot of stress. It was real sudden, within a week of finding out the news I had to move in with mum's new boyfriend. I guess I was really angry, confused, stressed. That may have played a part." (Jerry, male, 29).

Sharing a similar perspective, Emma (female, 24) also commented on unprecedented levels of stress co-occurring with her SP. Following her recent immigration to Australia and her mother's recent cancer diagnosis, she viewed these stressors as potential contributors:

> …It was kind of strange. The first time that it happened I was living in Sydney. I think it had been like, a few months over there. So it was stressful, like with that type of thing. Then

> [laughter], it's not actually funny, we found out that mum had cancer. So it was like, stressful with that type of thing. (Emma, female, 24)

Lily (female, 26) commented that her understanding of elevated stress as a potential cause motivated her to be more cognisant of her stress-levels. By attributing her experiences to stress, this caused her to become more mindful to reduce the likelihood of SP re-occurring:

> …I think after the first time [pause] because I read up on it a little more and I think they said that you're likely to experience it in moments of stress. So I think I was a little bit more conscious after the first time in sort of monitoring my stress. (Lily, female, 26)

An Absence of Meaning.

For those who resonated with a physiological understanding of SP, the experience held limited significance, purpose or underlying meaning. One-third of the participant sample directly commented upon the absence of meaning, where focus was more placed upon potential causes. Jerry (male, 29) commented on his perspective of the experience:

> …I'm not sure it was like a meaningful experience. I don't think I learned anything from it. It did happen a lot when I was quite sleep deprived. Like, if I had late nights like a few nights before and I was super tired. That's when I would experience it the most. (Jerry, male, 29)

The perception of SP as an insignificant, physiological event was also shared by Emma (female, 24). For Emma, SP was understood to be generated by drug-use, poor sleep quality and other factors associated with bodily dysfunction. As a result, the experience was viewed as purely physical in nature with no greater meaning. She claimed, "the only cause was like, drug-use but I didn't think it has any specific, um, meaning or like any spiritual meaning or anything like that. I thought it was just like, something that sort of happened".

A 'Logical' View.

Half of the participant sample who viewed SP through a Western, scientific framework either commented directly on, or alluded to the belief that SP is not a spiritual experience. By viewing the experience through a scientific lens, participants suggested this was the more logical view. Noah (male, 22) who understood the SP experience as a "mental or physical process", elaborated further upon his perspective of alternative interpretive frameworks:

> …If I was having a discussion with someone that had sleep paralysis and they viewed it as like [pause] something to do with their, I don't know, their energy levels or something like that, I wouldn't rubbish them. I would be interested to hear their explanation but like, in the back of my mind, I'd be sort of thinking "oh, that's a bit whacky". (Noah, male, 22)

Not only did he endorse a more scientific view but he also believed this was a perspective shared by many within Aotearoa New Zealand, in which he commented "I'd say, in New Zealand people aren't like religious or spiritual. They would just not find explanations of those kinds for anything to be logical" (Noah, male, 22).

Lily (female, 26), who identifies as Chinese, shared that she and her family have resided in New Zealand over several generations. Although familiar with the traditional framework drawn upon by many within Chinese culture, this did not resonate with her own understanding of the experience:

> …In a lot of Asian culture, particularly Chinese culture, it's rationalised as like a ghost or demon sitting on top of you. So when my friend got it, she's also Chinese, she told me that's what her parents said it was. I sort of was like "oh, that sounds like a load of rubbish". That can't be it. So, I've already rationalised it in my head. (Lily, female, 26)

Elaborating further, Lily justified opposing the Chinese framework due to her preference for a scientific view. She claimed "I definitely don't resonate with the "ghost theory", I guess particularly because there's a scientific explanation that can easily describe and explain what's going on".

Charlotte (female, 23) also opposed a spiritual view of SP. By perceiving the experience through a spiritual lens, she was concerned that this perspective may exclude serious, underlying causes and "might exclude other reasons as to why someone might be having it, like mental illness". She further explained:

> …So you know, for example, like hundreds of years ago, how sometimes people had hysteria back when they classed people to be possessed by demons. They wouldn't understand that the person might have schizophrenia. I think if it was considered too much to be a spiritual experience, then it excludes the fact that it might be like an underlying consequence of some other underlying cause. (Charlotte, female, 23)

A Spiritual Perspective

By contrast, nearly half of the participant sample preferred a spiritual explanatory framework to understand SP. All participants who viewed the experience from a spiritual lens ascribed significant meaning to the experience, viewing it as a time of ancestral connection or a mode for receiving important messages.

A Spiritual Experience.

Interestingly, not all participants reported recognition of the term "sleep paralysis" in regard to their experience. Although this label is attributed to the experience within dominant, biomedical discourse, for five participants, SP was considered a normative spiritual experience. Taia (female, 28), who identifies as Indigenous Māori, viewed the experience as a time of connection with her brother who had died when she was young. She further elaborated on her perspective of the phenomenon as originating from her spiritual reality:

> …I would say I live in te ao wairua [the spirit world]. That's just how I've always navigated the world. Ever since I was younger, I could always learn my [deceased] brother would come and visit me and I'd always talk to him and yeah, picking up on things and reading people and places around me. It's a pretty normal way of existing. So yeah, it's quite interesting, like "sleep paralysis". I've never actually thought of these experiences as "sleep paralysis". (Taia, female, 28)

Anahera (female, 25), who also identifies as Māori, expressed how her cultural beliefs guided her interpretation of the experience, sharing that her experiences of SP are viewed as a crucial time of connection to spiritual sources:

> …But I would say probably, Māori in terms of the interpretation of it. So in general, it's just like a spiritual experience for me but the cultural side brings in interpretation of the experiences and helps me connect a bit more to my ancestors. (Anahera, female, 25)

Spiritual Causation.

Not only did participants view sleep paralysis as a spiritual experience, but they understood it as precipitated by external, spiritual causes as opposed to internal factors impacting upon the body or mind. Two prominent themes in relation to potential causes emerged, including: *Embedded in the Land* and *Negative Energy* – both of which are elaborated upon in more detail below.

Embedded in the Land.

Aroha (female, 23), who identifies as Indigenous Māori, acknowledged her experience may have presented some spiritual association with the land's history. Coming from a religious family with her father as a minister, Aroha reported a feeling of "safeness" at her own home knowing "the land was blessed". Although Aroha does not identify as religious herself, she considered the blessing of any environment an important ritual to "get rid of bad spirits and energies". As having little knowledge as to whether her friend's house was blessed, she recounted her initial thoughts as to what may have caused her first experience of SP:

> …I think after the first time it happened, because I was at my friend's house, I thought maybe there's a bad spirit in the house or, you know, maybe something happened in that

> house because it had never happened at my house. Yeah, it was at her house so I thought, maybe the land or someone died there. That was kind of what my mind went to first just because of how bad the energy felt. (Aroha, female, 23)

Taia (female, 28) felt that the spiritual connection was a salient part of her experience – facilitating connection with other Indigenous communities who hold similar experiences and backgrounds:

> …And a lot of them [spiritual experiences] happen at times of meaning. You know, with the one that happened in Australia, you know, I'm an Indigenous person coming on to Indigenous land. We've shared the same, sort of, very similar experiences, you know, of massacre and oppression. It felt like that connection was really important for that experience. (Taia, female, 28)

Jaz (female, 47) expressed her beliefs around the experiences as linked to the environment and a spiritual, ancestral presence:

> …I think it may have something to do with the environment. I think so because my ancestors are there. What I know is that growing up my grandfather, my mother's father, he went to the Cook Islands. When he came back he said "do you know these ghosts? I've seen them!" and "I'm telling you, there's ghosts!". So, you know, I believed him and I still believe him. (Jaz, female, 47)

Negative Energy.

Some participants who viewed SP as a spiritual experience, associated the experience with the presence of negative energy. Aadhya (female, 22), who identified as New Zealand Indian, expressed her perspective of the experience as precipitated by either "jealousy or hatred" from an external source. Further elaborating on her perspective, she claimed:

> …Because I do really believe in like, how other people's negativity can impact you. You know, positive vibes, negative vibes, all of that can really get to you. I think it was just my first experience of it myself. (Aadhya, female, 22)

Subsequent discussion surrounding Aadhya's perspective unveiled that her interpretation was in-part influenced by Indian culture. Rather than confiding in others, Aadhya and her extended family in India believed that it was best to withhold from openly discussing the experience as it may strengthen the energetic cause. Aadhya expressed:

> …I think it's mainly because of the culture there. It's like, the understanding that something's gotten into her or something. It's kind of put across that you shouldn't tell anyone because you never know who could be doing it to you. If they find out you're being

> disturbed, finding out is better for them and they'll just keep doing it. I do have extended family in India, so I think they were kind of like "oh, kind of keep it on the down-low". (Aadhya, female, 22)

Aroha (female, 23) recounted her initial thoughts following an experience of SP. By viewing bad energy as a salient feature of her experience, she claimed:

> …Afterwards I think the thing I was thinking most about was like, "what was that" and "who was that?" because, like I said, I felt a very strong presence and a bit of bad energy, like the room just went dark. Obviously it was dark because it was night time but it was like a *feeling* of darkness. It just felt like a bad energy in the room. It's like that really uneasy kind of feeling. The one thing I kept thinking about was, "what was that energy?" and "what did they want from me?". (Aroha, female, 23)

Jaz (female, 47) elaborated on an instance where her cousin confided in her with a distressing experience of SP. The advice that she provided appeared guided by her belief in energetic causes exacerbating the experience:

> …That's what I told him [cousin], just "try not to be afraid". So that's all I sort of said to him because I haven't experienced what he's experienced. I just don't want him to be afraid because I'm not sure if that would feed the fear. It may feed the energy or well, I call it energy. Well that's how I see it. (Jaz, female, 47)

Important Messages.

When conceptualised as a spiritual experience, SP was predominantly seen as a significant time of connection with a spiritual realm – an experience where critical messages or warnings may be received. Taia (female, 28) shared how her perspective, which was provided by her mother, helped her to understand the meaning behind her experience:

> …I think because my mum, from when I was so young, already set in stone a way to understand it or make sense of it. You know, by letting me know that they're [ancestors] trying to communicate with me. They're not meaning to do any harm, they're just trying to get through what they want to say. So that is the way that I've always viewed my 'sleep paralysis' [laughter]. (Taia, female, 28)

Anahera (female, 25), who also shared this perspective, expressed her understanding of the experience. Although the experience was recognised as distressing, she believed the receiving of messages was important and served a greater purpose:

> …It reminds me that I have my ancestors around me to help me in those situations if I call for them. It's probably not bad spirits. But again, it's that communication, they're trying to

> say something. I don't know what they're saying and then I'm freaking out because I don't know what they're saying. So it's distressing but it's also kind of like a meaning for a purpose. (Anahera, female, 25)

Jaz (female, 47) communicated how her experience of SP may have been a message of warning, following a period of dishonesty:

> …I was very dishonest in a relationship and I guess that was taking its toll on me. I'm not sure if that was some type of warning or whether it was trying to get me to understand what was best for my own wellbeing. (Jaz, female, 47)

A Transformative Experience.

Some participants who reported a spiritual interpretation of SP viewed it as both a salient and transformative experience. For some individuals, the experience was viewed as an 'awakening' which prompted individuals to view the world in a profoundly different way. As expressed by Anahera (female, 25):

> …But experiencing it [sleep paralysis] at 23, that was a kind of boost into the spiritual area for me, like actually acknowledging that and getting into it. I feel like it was needed to kind of start it off because I wouldn't have actually gone into that area if that didn't happen. (Anahera, female, 25)

Sharing a similar perspective, Jaz (female, 47) also commented positively on how her encounter with SP promoted her journey into spirituality:

> …The healing, there's so much healing. There's so much courage, so much faith, not as in religion, but just faith. Yeah, the journey, without it I don't think I would have been able to cope very well. Yeah, so it's helped me in a big way. (Jaz, female, 47)

Essentially, viewing the world through a spiritual lens helped these participants to cope with their experience(s), transforming SP from a seemingly distressing experience to one laden with significant purpose and meaning. As expressed by Taia (female, 28):

> …Having that wairua-lens or living within a wairua world, it helps a lot. It helps. Yeah, I think you can see greater meaning in the experiences that help you to keep moving through the world rather than prevent you. (Taia, female, 28)

There's Nothing Wrong With Me.

The majority of participants who viewed SP as a spiritual experience expressed their conflict with the Western, biomedical conceptualisation of SP (seen as a diagnosis and indication

of physiological abnormality). When viewed as an experience of both significant spiritual meaning and purpose, Taia (female, 28) expressed, "I don't see it as anything that needs to be corrected. Yeah, there's nothing wrong with it". Elaborating further on her perspective, she commented:

> …I think it's that Western framework. It's just, because they don't have, within that Western framework, that spiritual lens, it's automatically going to be looked at as something wrong or something that needs to be fixed. But it isn't. I think it can be distressing if you don't have anyone who can kind of help you make sense of it or if you don't have that same spiritual lens then you might not go out and find a spiritual solution for it. In that case it might be "okay, I'm going to get this diagnosis and go get this medication" and maybe it'll be fixed somehow. Well, maybe it will, but is it being fixed? Or is it just being repressed? (Taia, female, 28)

Aadhya (female, 22), who also held a spiritual view explained that the framing of SP as a diagnosis failed to align with the ways in which she interpreted her experiences:

> …But because "sleep paralysis", it's not just two words, it's also a diagnosis. So like, the phenomenological side of it, I think that explains what I was experiencing. But the social constructionist version of it, of sleep paralysis as a sleep disorder or some sort of disorder, I don't think that resonated with my experience. (Aadhya, female, 22)

Anahera (female, 25) who sought advice from a kaumatua (Māori elder) following her experience, shared that the advice she received did not frame SP as requiring a preventative or treatment-focused approach:

> …Yeah, he [kaumatua] didn't say anything about preventing it. He said some people can experience it more than others, so nothing about preventing it. I don't think I would ever meet anyone on that side that would say to prevent it.

Biomedical Treatment – The Last Resort.

Generally, participants who communicated a spiritual perspective of SP were not completely opposed to medicalised treatment approaches – many commented that they would be open to medical support if their experiences increased in intensity or frequency. However, several participants expressed that visiting a medical professional or utilising medication would be difficult or only considered as a last resort:

> …With things that have a spiritual explanation, I always think there's an alternative before you can get to the medication. Like medication, for me, is always the last resource if nothing else works. (Aadhya, female, 22)

> …I'm open to hearing what they would have to say and what their thoughts are on it, but I probably wouldn't be open to taking any kind of medication for those kind of experiences. Unless it got to the point where it was really bad and I was just super desperate for answers, but where I am now, I feel okay in myself and knowing that I don't need any kind of medication to stop these experiences. (Aroha, female, 23)

> …I mean, my doctor's very nice, lovely, but it would be a bit weird for me to come in and be like, "I'm having sleep paralysis but I think it's because I have this ancestor trying to communicate with me" or something like that. I feel like they'd be like "okay, well, we'll treat the sleep paralysis but we can't do anything about the other thing". (Anahera, female, 25)

Support

The third domain summary encompasses all themes relating to support, including: preferred support systems drawn upon by experiencers, types of reactions received and factors that suppressed reporting the experience to others.

Family

All participants reported sharing their experience(s) with immediate family members including parents, grandparents and siblings. Numerous participants reported that family members provided them with an explanation, aiding understanding and reducing fear:

> …It was a pretty scary experience but after I talked to my dad, I knew what it was. So yeah, that kind of put me at ease a little bit because I guess if you didn't know what it was and you'd never been around someone who had experience it, it would be quite traumatic. (Aroha, female, 23)

> ….Because usually, if anything that I felt I couldn't make sense of, I would always talk to my grandmother. Like, I could talk to her about those sorts of experiences, she was more in tune with it. She just gave us the information that we needed, she told us not to be afraid of anything. It was such an experience but she hoped we would realise that it exists, all these experiences happen. (Jaz, female, 47)

Friends

The majority of participants reported sharing the experience with friends to explore whether others had similar experiences and as a source of support:

> …But the only other times I would have talked about it is like, with my friends as a way to find out if anyone has also had sleep paralysis and what their experiences of it was to see if

> it was similar. Or also if there was a reason behind us getting sleep paralysis. (Charlotte, female, 23)

> …All of my friends, we are all on the same wavelength. I mean, my friends study, you know, spiritual stuff and they are Māori students as well. So it's quite normal for them to hear it. They believed me 100% when I talked about it, they've had their own cases of sleep paralysis themselves and spiritual things happening as well. (Anahera, female, 25)

Google

Half of the participant sample expressed conducting online research to facilitate understanding, for reassurance that the experience wasn't an indicator of something more severe or for general advice:

> …I kind of did a little bit of research on it when it first started happening and then, I read other people's stories and experiences. It was after that I realised "oh, okay, nothing's actually trying to kill me. I'm good". (Jerry, male, 29)

> …I sort of Googled how to get rid of sleep paralysis, I don't know if that is seeking advice like yeah, I didn't go to a professional or anything. Yeah, and I just sort of wanted to get rid of it, or at least know how to get out of it. (Lily, female, 26)

A Preference for Spiritual Support

Several participants who shared a spiritual perspective of SP expressed a preference for spiritual support. Traditional spiritual healers, kaumātua, tohunga and spiritual teachers were viewed as more aligned with the ways in which SP was conceptualised and therefore, were considered as more appropriate sources of support. Several participants commented that this type of support provided explanation, mutual understanding and generally normalised the experience:

> …I would and I do seek out healers and I go to my mum as well. She has a lot of spiritual understanding. Yeah, I first and foremost would go to traditional and Indigenous spiritual healers. (Taia, female, 28)

> …We've [family] got a spiritual teacher back in India, which we are in regular contact with. But yeah, I called her about it and she basically kind of provided like, kind of provided an explanation. (Aadhya, female, 22)

> …I mentioned it to a kaumātua. So like, the elder Māori people. I didn't get in to too much detail. He was kind of like, it's just something that happens, like it's normal. Not like a *normal* thing, but it happens. He attached it to the spirit, a spiritual experience. (Anahera, female, 25)

Normalising the Experience

Several participants commented that others within their support network normalised the experience. Others directly reassured the individual that their experience(s) were normal or related with shared experiences. By validating the experience as a common occurrence, participants generally viewed this support in a positive light, such as Taia (female, 28). She claimed, "most of my understanding has come from her [mum]. She's always made sure I know that it's normal. That's a big thing, that it's fine. You know, that it's just an experience". The importance of normalising the experience, or at least validating the experience as one that was not 'abnormal', was shared by numerous other participants:

> …I guess my dad made me feel like it was okay, like I was fine. Like it had happened to him so much, like it was not so much of a bad experience because it had happened to him so many times. It just made me feel more comfortable. That, you know, there's so many people out there that this actually happens to. Like, it's a common experience for a lot of people so I'm not like, abnormal for it. (Aroha, female, 23)

> …I talked to my mates about it. I've told you about this one mate who has experienced it as well and we kind of just shared our experiences. He sort of reacted by almost, taking solace in the fact that I had experienced it too. It gave him and I comfort that like, it wasn't some weird as thing that was happening to us. (Noah, male, 22)

Societal Stigma

Some participants expressed hesitance about confiding in others outside of their immediate family. Whether this was due to discomfort with sharing a spiritual perspective or the notion that experiences like SP indicate mental illness, both reasons pointed toward societal stigma making confiding in others a daunting prospect. Following the passing of her sister, Amelia (female, 23) recounted a traumatic and vivid experience of SP. Although she had experienced what she described as "active dreams" since a young age, the image of a man covered in blood and hanging from her ceiling felt eerily different from her prior experiences. Following her traumatic encounter, she expressed her reluctance toward sharing her experience with others due to the "expectation of what they would think". Elaborating further, she expressed:

> …I had a big perception of what people thought of me back then. I don't care as much anymore. Like, I didn't want people to think I had changed loads because my sister died. So anything that could feed into them thinking that, I wouldn't necessarily talk about. (Amelia, female, 23)

As a perspective shared by Jerry (male, 29), he also elaborated upon how open discussion of experiences such as SP may invite judgement and speculation of mental illness:

> …But I mean, if you just told a standard person, they would probably think you were a bit crazy. Like, if I was to go around telling everyone like "I get these hallucinations at night", they would probably be like "yeah, you need some medication". (Jerry, male, 29)

Taia (female, 28) commented on the judgement and rejection she often feels toward her traditional Māori perspective of SP:

> …I think I'd be a bit more wary of sharing with Pākehā [New Zealander of European descent] than I would with Māori, but I have come across a lot of Māori who, you know, I guess because of colonisation are separated from traditional beliefs and understandings. There is this like, "oh, don't tell us about that, that's that Māori stuff" and I'm like, "okay, yeah". (Taia, female, 28)

As a result of societal judgement and rejection she felt toward her worldview, Taia expressed her cautionary approach when confiding in others regarding experiences such as SP:

> …I've gotten more comfortable sharing these experiences openly but I would still be wary just because that's how I was brought up, to be quite wary about it. I definitely do choose my spaces though because I do know that there are some spaces where it's just not safe. So just don't do it. Yeah, there's still definitely wariness of where you share. (Taia, female, 28)

Coping Strategies

The fourth and final domain summary categorises the most commonly reported techniques and interventions utilised by participants to cope with SP. Across the participant sample, a diverse combination of cognitive, spiritual and behavioural techniques were used to regain control of the body or to relieve individuals from the accompanying anxiety. Three types of techniques are presented as main themes – *Cognitive Techniques, Spiritual Support* and *Behavioural Interventions*.

Cognitive Techniques

As several participants reported that they remained cognisant and in control of their mind, common strategies involved the use of cognitive techniques. Three common cognitive methods to either regain control of the body or at least, relieve individuals from the associated anxiety were reported.

Incremental Bodily Movement.

Some participants expressed how the mind was used as a tool to regain physical control.

Participants referenced a common method of incrementally moving fingers and toes, which slowly helped free them from the paralysis:

> …The main method that I would have used was to try and move smaller parts of your body first, rather than trying to wake up immediately. So for example, try to move your toes and fingers first and then work your way through the rest of your limbs. To me, that makes sense because my understanding of sleep paralysis is that your mind's awake but your body is still asleep. So in my head, in my view, it makes sense that that is a proposed method. I would say it aligned really closely with how I understood sleep paralysis to be. (Lily, female, 26)

> …I really just use my mind to like, think about just one thing that I can try to control so I'll talk to myself in my head and I'll just say, "okay, let's focus on moving fingers". I'd focus on one finger, I'll focus on my little finger and just trying to move it just a little bit and as soon as I can move it the tiniest bit then, you know, I finally got the control of being able to move my hands. Once I can move my hand, usually I can somehow get myself out of being paralysed. (Aroha, female, 23)

Surrendering to the Experience.

Several participants commented on the importance of remaining calm during the experience. The technique of not resisting feelings of paralysis appeared to be a helpful intervention for many individuals, such as Lily (female, 26) who claimed, "I think trying to fight it when you have already tried, doesn't work. I think it just freaks me out even more so, I sort of just admit defeat in a way". Consciously accepting the lack of the control and giving-up the fight was also shared by others:

> …But then I would realise that the only way to get out of the paralysis would be to just calm down, trying to stop fighting. As soon as I stopped fighting it and just like, calmed my breathing down, then it would loosen. I'd just wake up and sort of be in a bit of like, a sweat. (Noah, male, 22)

> …I don't really have nightmares that often. Like I don't really have scary dreams or dreams I'm uncomfortable with. If they go that way, then I'm like "I'm in a dream" and I just kind of like, ride it out. (Amelia, female, 23)

Calling for Spiritual Support

For spiritually inclined participants, calling for spiritual support was viewed as a useful technique to generally cope with the experience and sometimes, to regain control of the physical body. As expressed by Taia (female, 28), she claimed "I called out to my brother, because he

passed away. So I called out to him, I'd be like "hey, I need some help here" and I got released from it". Anahera (female, 25) also shared how calling out for spiritual support was viewed as an effective strategy:

> …Yeah, I don't have control over that but I do have control over calling for help. That would be my only control, I guess, in that moment. Is calling for someone to come in and stop it. In terms of like, in a spiritual way. (Anahera, female, 25)

Jaz (female, 47) expressed how during an instance of SP, her late grandmother appeared which provided her with the support, knowledge and strength to cope with her experience:

> …I remember when I was young, the moment she [grandmother] shared that knowledge with me. During my experience, she [grandmother] appeared straight away and knew what to do and say. So without trying to use my body physically, like talking or moving, I remembered that I could actually use my mind. (Jaz, female, 47)

Behavioural Interventions

Several participants described their use of behavioural interventions following experiences of SP. All behaviours suggested avoidance strategies, whether this be avoidance of sleep, the darkness or the environment in which the experience occurred. These themes are presented in further detail below.

Sleep Avoidance.

For some participants, the fear elicited by experiences of SP resulted in sleep avoidance either immediately following SP or on subsequent days/nights:

> …There were a few times where I was actually pretty scared to go back to sleep because I was like, I don't really want to do that again. So I would just kind of sit there and do stuff until I could fall asleep. I would like, put something on to watch or do something to like, distract me from thinking about it because I could feel it coming on. (Jerry, male, 29)

> …I'd usually just get up and try do something to keep me awake. It kind of got to the point where like, long term, I just avoided sleeping during the day because that's when I knew it was going to happen. (Noah, male, 22)

I Don't Want To Be In My Room.

Some participants created an association between the experience and their immediate environment. As a result of this association, some participants chose to avoid sleeping in the same environment in which their experience(s) occurred. Immediately following her vivid and traumatic

experience of SP, Amelia (female, 23) expressed her reluctance toward staying in the environment in which her experience occurred:

> …But then I drove back up to Auckland the next day and spent a few days at home with mum and dad because I was just like, yeah, I really don't want to be in my room after seeing that. (Amelia, female, 23)

Jaz (female, 27), who resonated with a spiritual perspective of SP, first experienced SP approximately twenty years ago. When returning to her homeland of the Cook Islands several years later, she expressed avoiding the area in which her first (and only) SP experience occurred. Despite returning to the same house, Jaz chose to sleep in a different area:

> …I think later on I became fearful and scared when I visited the Cook Islands many more years after that. I'm thinking, 2016 I went back, I wasn't as afraid because I still went back to that same house. I didn't sleep in that same area, I slept in a different room but I still felt that there was something present. (Jaz, female, 47)

Sleeping with The Lights On.

For some participants, the fear associated with the experience resulted in behaviour such as sleeping with the lights on for many subsequent nights:

> …I made sure the lights were turned on in my room, I was too scared to turn them off. It definitely made me more afraid of night-time. Yeah, I was afraid of that happening again so I was like, okay, put the light on and it might make you feel better. That lasted for a year. (Anahera, female, 25)

> …I do remember there was a time I wasn't going to sleep with my lights off because I just couldn't. I was just scared of falling asleep and that lasted for about a week because I was having it continuously. (Aadhya, female, 22)

Chapter Summary

As suggested by the results, phenomenological characteristics appeared consistent across the sample, such features included: fear, a presence and an array of physical sensations. Although a similar experiential structure was reported across the data, a point of divergence appeared within the ways individuals interpreted and explained their experiences. For some individuals the experience was heavily grounded within a scientific understanding, for others however, the experience was viewed via a spiritual lens. Avenues of support were found influenced by the interpretive frameworks drawn upon by participants. In addition, stigma was found to place a barrier between some experiencers and discussing the experience with others. Finally, several

strategies utilised to cope with the experience were reported. The following chapter discusses these results within the context of existing SP research.

Chapter Five: Discussion

This chapter discusses key insights gleaned from the results. Whilst the phenomenological characteristics reported appeared largely consistent across the sample, findings suggest two prominent interpretive frameworks were drawn upon: *Biomedical* and *Spiritual*. These interpretive frameworks shaped the ways in which individuals understood, explained and responded to experience(s) of SP and are further discussed within the chapter. Issues relating to stigma, whether that be stigma of perceived mental illness or societal judgement toward spiritual worldviews, are addressed. Additionally, personal management strategies utilised by participants are discussed. Finally, implications of the current study to both clinical and research contexts are elaborated upon, in addition to limitations and potential future directions.

Phenomenology

To the best of the researcher's knowledge, the current study is the first to specifically investigate subjective experiences of SP within Aotearoa New Zealand. Generally, the phenomenological characteristics across the sample corroborates findings of numerous other studies within the scholarship of SP, further suggesting a global consistency of features (Cheyne & Girard, 2009; Cheyne, Newby-Clark, et al., 1999; Cheyne, Rueffer, et al., 1999; Jalal & Ramachandran, 2014, 2017; Solomonova et al., 2008). The majority of participants in this study reported a perceptual component to their experience, sensing a presence often described as an ambiguous "shadow figure". Some participants described the associated figure as responsible for the accompanying chest or bodily pressure, expressing their feelings of being "pressed down" or "pushed" by the entity As supported by other studies, participants generally reported an inability to move during their experience, which in turn generated a sense of vulnerability, lack of control and a subsequent fearful response (Davies, 2003; Hishikawa & Kaneko, 1965; Ramsawh et al., 2008)**.**

The involvement of a "sensed presence" appeared consistent with the two major phenomenological classes proposed within the three-factor model developed by Cheyne et al. (1999). The 'Intruder' category classifies experiences of sensed presence, fear, auditory, visual and sometimes tactile perceptions (Cheyne, 2005; Cheyne & Girard, 2007; Cheyne, Newby-Clark, et al., 1999). The second category, 'Incubus', is associated with pressure upon the chest, breathing difficulties and chest pain (Cheyne, 2005; Cheyne & Girard, 2007). While reports of breathing difficulties and pain appeared less common among the present sample, the majority of participants reported experiences that fit comfortably within both classes of this model.

The third phenomenological class within Cheyne's three-factor structure, classified as 'Vestibular-Motor' (VM) experiences (experiences that involve sensations such as floating, out-of-body experiences (OBEs) and autoscopy) (Cheyne, 2005; Cheyne & Girard, 2007, 2009), were less frequently reported among the sample. Although this may be in-part due to the small sample size of the current project, it is also possible that participants may not have recognised these features

as co-occurring with SP. While SP is commonly believed to involve the presence of a threatening external agency, often eliciting great fear and panic, V-M experiences tend to provoke contrasting feelings such as happiness and bliss (Cheyne & Girard, 2007). Essentially, as V-M sensations diverge significantly from more stereotypic presentations, it is possible that participants did not recognise these experiences as constituting SP, thus resulting in lesser reports. Indeed, as most participants reported learning about SP from the internet, which largely reinforces stereotypes, this likely limited the recognition of alternative forms of the experience.

Unsurprisingly, a sense of vulnerability due to the temporary paralysis, in conjunction with typically unnerving imagery, often causes great fear and terror (Cheyne & Pennycook, 2013b; Sharpless et al., 2010; Solomonova et al., 2008). Due to the accompanying paralysis, the present findings suggest that a general lack of control was considered a key source of distress and a salient feature of the experience for many. A common finding among studies, individuals often report limited control over bodily movement, despite maintaining the ability to open their eyes and report events within their surroundings (Davies, 2003; Ramsawh et al., 2008). Extending this knowledge, the majority of participants expressed cognitive dissonance where their highly cognisant state failed to align with the lack of physical control they perceived over their physical bodies. While participants largely felt 'awake' and maintained an awareness of their current context, a lack of voluntary control appeared to promote strong emotive responses such as a sense of helplessness, confusion and fear.

One participant expressed a disturbing experience of SP immediately following the traumatic loss of her older sister. Amelia (female, 23) described a visual depiction of an un-recognisable man hanging from the ceiling of her university hostel. Upon further elaboration, she believed that what she saw during her SP bared some similarity to the circumstances in which her sister had passed. Indeed, Sharpless and Grom (2013) found that the majority of their university student sample experienced SP following the death of a close relative. In addition, findings from their study also indicated that the deceased relative was often portrayed within the "hallucinatory" content. Such findings present an important insight into one of the ways that trauma can impact upon SP, further contributing to this little understood area. Essentially, those who have experienced trauma may find that imagery reminiscent of the traumatic event manifests during the experience – sometimes eliciting additional trauma and in some cases, survival guilt (Hinton, Pich, Chhean, & Pollack, 2005).

One report of an experience interpreted as physical assault was identified, further suggesting the potential of SP to constitute a traumatic event in some cases. McNally and Clancy (2005) found that the physiologic responses to traumatic instances of SP surpassed that of PTSD patients responding to scripts of traumatic experiences. Therefore, when experiences are perceived through a lens of fear, such as interpreting the experience as one of violent assault, episodes have the potential to generate substantial trauma responses. This finding combined with Amelia's anecdote above calls in to question the common narrative around the 'benign' nature of

SP (De Jong, 2005; Jalal, 2016; Rauf et al., 2023). Essentially, while SP may present as a seemingly harmless event for some individuals, for others, the experience may constitute a significant source of anxiety that may have severe clinical impacts.

Although reports of physical assault experiences within SP were sparse, which may be in part due to the small sample size, these are presented as seemingly common within SP literature. For instance, Parker and Blackmore (2002) found that experiencers of SP frequently report sensations of attempted assault and victimisation. Additionally, 'Incubus' experiences – experiences that were commonly reported within the present sample, are often perceived as highly threatening situations, which are sometimes interpreted as violent physical or sexual assault (Cheyne & Girard, 2007). In this regard, it is probable that this form of SP is more common than surmised across the sample. The scarcity in reports within the current study may rather be the result of negative societal attitudes toward these types of experiences, to which are commonly misinterpreted as indicators of mental illness (Cardeña et al., 2017). Essentially, this assumption of pathology has long suppressed reporting of SP (Hufford, 2005), which will be discussed further in depth later within this section.

Interpretations

Despite the presentation of similar symptoms across the sample, participants understood, explained and responded to the experience in a variety of different ways – interpretations that appeared significantly influenced by their pre-existing personal (e.g., spiritual) and cultural beliefs. Although research within the field of SP tends to focus upon similarities pertaining to cross-cultural presentations of SP, cultural nuances showed meaningful differences that may have clinical relevance to psychology and medicine within Aotearoa New Zealand.

Findings indicate that individuals typically drew upon available cultural resources to make sense of their experience(s). Due to the prevailing dominance of the biomedical model within Western societies, unsurprisingly this framed the explanations of SP for just over half of the sample. Those who drew upon scientific explanations of SP, viewing it in terms of physiological abnormality, predominantly believed their experience to be the result of factors such as poor sleep quality and stress. These commonly cited causes appeared largely congruent with the responses of Danish participants and partially congruent with Egyptian university students from a study by Jalal et al. (2014), which surveyed three population groups, including the general Danish population, an American university in Cairo and the general Egyptian population. Essentially, both Danish and university student groups commonly attributed their SP to general physiological causes, sleep problems (i.e. sleeping the wrong way or fatigue) and stress. Although the Cairo university students sometimes attributed their experience to spiritual causes, spiritual attributions were substantially lower than those of participants from the general population of Egypt.

Overall, it is plausible that similar results were gleaned due to the influence of secular, Western values across these contexts. While Scandinavia (Denmark) is considered one of the most secular areas in the world (Zuckerman, 2008), the American university in Cairo is also heavily influenced by secular and Western-style education (Jalal et al., 2014). The local Aotearoa New Zealand context, similar to many other nations around the globe, is also largely influenced by the Western scientific enterprise which is often considered "rational, logical, superior, and universal in its application of laws and principles" (Valentine et al., 2017, p. 64). Essentially, populations influenced by scientific thought tend to endorse the notion of materialist reductionism, or the idea that all phenomena has an underlying physical basis (Lyons & Chamberlain, 2006). In this respect, it is to be expected that a large portion of participants from the current study attributed their SP to material, physiological processes.

Essentially, when SP was framed as a physiological phenomenon, it was merely understood in terms of physical abnormality – with little meaning extending beyond the context of bodily malfunction. While no further underlying meaning was deemed necessary, this absence of meaning appeared to impact upon where and how support was sought. While spiritually inclined participants reported confiding in external means such as traditional spiritual healers, teachers, kaumatua and tohunga, no scientifically inclined participants reported seeking any form of clinical support – despite some individuals reporting significant levels of distress. It is possible that the connotations associated with the biomedical perspective of SP suppressed reports, such as found by Fukuda (1993). The biomedical framing of SP implies internal deficit, abnormality and implications of psychological or physical illness, therefore it is plausible that these implications served as a barrier for seeking external means of support.

Findings suggest that scientifically inclined participants were instead more likely to turn to online research for information and advice regarding SP. This finding contrasted with information-seeking behaviour from spiritual participants, who were more likely to facilitate understanding and advice through personal networks, such as family. This may in-part be explained by the salience hypothesis - when SP is interpreted through a particular cultural filter, individuals within the culture are understood to share more information regarding its causes and remedies (Jalal & Hinton, 2013; Spanos et al., 1995). Essentially, the biomedical model which predominantly views the experience as dysfunctional yet benign, may explain the lack of cultural elaboration and subsequent absence of readily available resources to cope with such experiences. As a result, it is plausible that scientific individuals were more inclined to facilitate understanding through online research due to the lack of available resources elsewhere.

By contrast, several individuals reported adherence to a spiritual perspective of SP. As a culturally diverse sample, spiritual perspectives were dependent on cultural and religious backgrounds. For instance, one participant of Indian descent expressed adherence to a spiritual understanding that differed to that of Indigenous Māori participants. Additionally, not all Māori participants expressed endorsement of traditional cultural explanations, with one participant

expressing a spiritual perspective that appeared to originate from her religious background rather than her Indigenous background. Ultimately, despite the diversity of interpretations across spiritually inclined participants, all individuals adhering to this framework subscribed to non-material explanations that differed substantially from physiological explanations expressed by non-spiritual individuals.

Rather than the experience viewed as purely physiological in nature, the experience generally represented vital communication with spiritual realms. For many Indigenous people, including Māori, spirituality is intricately woven into reality and everyday life (Christakis & Harris, 2004). This can be seen through the dominant aspect of reciprocity held by many Indigenous peoples, in which reciprocal relations with all life forces must be honoured (Hart, 2010). As the notion of reciprocity with all living and non-living entities is regarded with great importance within Indigenous ontologies, when this lens is applied to SP, the experience may be viewed as one symbolic of connectedness.

Several Māori participants expressed viewing their experience as a means to receiving important messages or warnings from the spirit world, whilst facilitating connection with ancestors. Such perspectives align with historical reports of non-Indigenous settlers, where narratives describe Māori traditional thought surrounding the role of wairua during altered states of consciousness such as sleep (e.g., Beattie, 1918; Best, 1922; Goldie, 1904). Within te ao wairua (the spiritual world), such experiences are understood in terms of matakite experiences – experiences that relate to any person who is believed to possess “second sight”, such as the ability to see beyond the physical world (Best, 1922; Lindsay et al., 2022; Ngata, 2014; NiaNia et al., 2019). Due to the spiritual conceptualisation of sleep present within te ao Māori, the SP experience may be viewed as an experience to be nurtured.

One report of a positive SP experience was gleaned from the current study. Although less common, positive experiences of SP have been reported within previous research (Cheyne & Girard, 2007; Denis, 2018). Anecdotal evidence suggests that V-M experiences, sometimes co-occurring with SP, are more positively valanced due to their ability to be manipulated to induce OBEs in addition to lucid dreams and “astral projection” (Denis, 2018). Findings from the current study extend knowledge of positive SP experiences, indicating that culturally embedded meaning attributed to SP can also impact upon general perceptions of the experience, including affective characteristics. Taia (female, 28), who identified as Indigenous Māori, expressed her comforting experience of SP which she viewed as ancestral visitation. Occurring during the Covid-19 pandemic, visitation from her late grandparent was viewed as a salient source of both comfort and support in her time of difficulty. Rather than a sense of paralysis, Taia attributed the restricted movement to positive sensations such as being hugged and held. Essentially, although Taia reported similar phenomenological characteristics to that of other participants (i.e. paralysis), the ways in which these were understood and subsequently described contrasted significantly from others within the sample.

Findings suggest that interpreting SP through a spiritual lens served as both a salient and transformative experience. For some individuals, the experience was viewed as a 'spiritual awakening' such as expressed by Anahera (female, 25) who claimed that the experience facilitated a positive and explorative journey into her own spirituality. As also expressed by Jaz (female, 47), who commented upon how her experience with SP stimulated a positive spiritual journey that provided her with healing, courage and faith. While experiences of SP were initially interpreted as frightening, the subsequent aftereffects for spiritual participants appeared overwhelmingly positive and for some, helped "in a big way" (Jaz, female, 47). Such findings align with the definition of exceptional experiences (EE's) as proposed by Lindsay et al. (2021) - experiences that deviate from accepted norms of secular Western reality, that have the potential for beneficial aftereffects when adequately integrated into the experiencer's life.

Generally, spiritually inclined participants were more likely to seek out understanding from those within inner support networks, such as parents and grandparents. While scientifically inclined individuals gleaned information through online research, explanations for the experience seemed more readily available and accessible for those located within a spiritual worldview. Differences in information-seeking behaviour between each group may be due to the differences in knowledge systems between Western science and traditional knowledge, and the ways in which information is transmitted. While Western science is based on academic and literate transmission, traditional knowledge is often passed on orally through generations by elders (Mazzocchi, 2006). In this respect, it appears that individuals located within spiritual worldviews had access to additional information regarding their experiences, relative to those who subscribed to scientific perspectives.

Regardless of interpretation, normalising the experience was viewed by the majority as crucial in reducing associated distress and confusion. Essentially, individuals felt reassured and comforted through relating to others and an understanding that the experience can exist within the range of normal functioning. For individuals adhering to spiritual models of SP, normalisation of the experience was validated from within their cultural worldview. For instance, matakite and/or wairua experiences tend to be viewed as normative by Māori, with matakite often reporting ongoing interaction with tupuna or kaitiaki (spirit guides) throughout their lives (Lindsay et al., 2022; Lindsay et al., 2021; Mark & Lyons, 2010; Ngata, 2014; Taitimu et al., 2018). With this cultural framework allowing for the experience to generally be accepted, rather than pathologised, this may explain why spiritual individuals were more likely to confide in external means of support.

While medical interventions of SP currently appear focussed on diagnosis and treatment, spiritual participants expressed an opposition toward this conceptualisation. For some, treatment was seen as a form of repressing the experience and thus to be cautioned against, as evidenced by statements such as "I don't think I would ever meet anyone on that side [spiritual side] that would

say to prevent it" (Anahera, female, 25). In this respect, the preference toward spiritual solutions for these participants was due to interpretive differences surrounding how these experiences are understood, approached and addressed. Rather than diagnosis and treatment, spiritual solutions were sought to help individuals decipher underlying meaning and thus, enable greater purpose to be drawn from their experience(s). Essentially, these differences in how SP is conceptualised between groups presents an important insight as for those who are spiritually inclined, biomedical explanations and subsequent treatment approaches may be of little utility or benefit. In fact, with several spiritually inclined participants expressing the effective use of spiritual responses (such as calling for support from the spiritual realm or confiding in spiritual means), biomedical approaches are not required to effectively respond to the experience.

Generally, spiritual interpretations of SP are broadly viewed as problematic within the scholarship of SP. For instance, Cheyne and Pennycook (2013b) asserted that culture specific beliefs regarding its causes elevates levels of distress following the experience relative to those who have lesser or no spiritual beliefs. Additionally, culturally driven fear rooted in traditional narratives have also been proposed to intensify symptoms, causing a longer duration of immobility and increasing the frequency of SP (Hinton, Pich, Chhean, & Pollack, 2005; Jalal & Hinton, 2013; Jalal, Romanelli, et al., 2021). Despite the dominant narrative, negative impacts as a result of spiritual perspectives were not found within the current study. Rather, spiritually inclined participants drew positive meaning from their experience(s), sometimes stimulating positive and healing spiritual journeys in the years following. While prior studies may have found elevated levels of distress following the experience among spiritual participants, it is possible that these results were recorded as a short-term or initial reaction to the experience of SP. As reported by the majority of participants in this study, the experience did typically elicit initial fearful responses however, these lessened over time. Prior studies may have yielded different results if participants had been interviewed within the years following SP. Essentially, it is possible that in time, many participants may have integrated experiences successfully and positively with the help of cultural resources, such as found within the current study.

As stated by Fukuda (1993), it is integral researchers have an awareness of culturally-specific terms applied to the experience prior to investigating the phenomenon within a particular population. Although findings from the current study suggested that most participants were aware of the medical descriptor, "sleep paralysis", one participant expressed her unfamiliarity with the label. Taia (female, 28) who conceptualised the experience through a lens of te ao Māori stated, "I've never actually thought of these experiences as "sleep paralysis". As Taia recognised the experience in terms of *wairua*, medical phrasing and terminology appeared distant, which failed to resonate with her personal understanding of the experience. In this regard, it is important that future researchers investigating the phenomenon within Aotearoa New Zealand familiarise themselves with culture-bound expressions of SP. Without doing so, it is possible that individuals may not recognise and report their experience, which may exert a negative influence on prevalence rates.

Stigma

Stigma surrounding the experience suggest that individuals did carefully consider how their experience(s) may be negatively perceived by others. Some participants commented directly on or alluded to the idea that their experience may be perceived as indicators of mental illness, with this stigma silencing them from openly discussing their SP experience(s). While previous research suggests that SP is least common within Caucasian majority populations (Sharpless & Barber, 2011), it is plausible that socio-cultural factors may play a role in suppressing reports of SP within these societies. For instance, disciplines of psychology and psychiatry have previously regarded anomalous experiences as mental disorders, a marker of pathology or psychological immaturity (Moreira-Almeida & Cardeña, 2011). With these disciplines shaping the ways in which Western societies view these experiences, the associated negative connotations may have impacted upon the rates of disclosure within these populations.

While findings indicated that individuals who subscribed to a biomedical view faced the stigma of mental illness toward their experience, it appeared those adhering to a spiritual view faced two stigmatising perspectives of society. Not only did these participants face the stigma of mental illness but in addition, also faced stigmatising perspectives toward their spiritual worldviews. In regard to the latter, findings suggest that those who adhered to scientific understandings expressed an intolerance toward alternative explanations. Spiritual frameworks were described by non-spiritual individuals using terminology such as “whacky”, “rubbish” and incapable of accounting for serious, underlying causes that may contribute to the onset of SP. As highlighted by Hufford (2005), this is the modern, secular view rooted in the understanding that spiritual belief does not rest on evidence nor has an empirical base. Although not a surprising finding due to the Western, secular context in which the study was performed, this rather highlights the on-going tension between spiritual experiences and modern medicine existent within multicultural societies such as Aotearoa New Zealand.

Ridicule toward non-scientific explanations indicated scientific prejudice, signalling a presumed superiority of the Western view – a common finding within spiritual research (Lindsay et al., 2021; Plante, 2016; Vieten et al., 2013). This is similar to findings reported by Yeung et al. (2005), where both Chinese and Chinese American participants were found to frequently dismiss and express ridicule in response to the clinician’s questions about spiritual causes of SP. Within the present study, derogatory attitudes toward alternative perspectives appeared largely unconscious, indicating how deeply entrenched these attitudes are within the dominant culture. Scientifically inclined participants appeared significantly less accommodating of alternative explanations, however, this appeared non-mutual. For instance, many spiritually inclined participants did not completely exclude medicalised treatment approaches, with some considering them if their SP were to increase in intensity or frequency.

Scientific prejudice can be attributed to the heavy influence of Western academic psychology (WASP) within the local context (Berry, 2015). The epistemological foundations of Western science, based on positivist principles such as objectivity and measurability, is often at odds with more subjective ways of viewing the world (Lindsay et al., 2021). Although beneficial in its own right, this specific type of psychology has rarely valued or granted legitimacy to Indigenous or spiritual perspectives (Valentine et al., 2017). With its dominating influence on core societal institutions, such as education, politics and employment (Berry et al., 2002; Valentine et al., 2017), this may explain how readily scientifically inclined participants accepted this perspective as superior and how quickly alternative explanations of SP were disparaged.

As a result of societal judgement and rejection toward her worldview, Taia (female, 28) expressed her cautionary approach when confiding in others about her SP. Taia expressed her "wariness" as a result of on-going stigma toward her spiritual worldview as "there are some spaces where it's just not safe". Like Taia, many Indigenous Māori have been found to be apprehensive to discuss their subjective beliefs due to fears they will be ignored, marginalised, misunderstood or pathologised (Lapsley et al., 2002; Lyndon, 1983; Taitimu et al., 2018). This calls for an urgent need to elevate spiritual perspectives within the research realm, such as increasing knowledge around perspectives of phenomena from Indigenous worldviews. By exposing individuals to cultural perspectives and framing these as legitimate in their own right, as done so within the current study, such research may impact positively upon societal attitudes. In doing so, this sets a basis for a more inclusive society in which all members are comfortable to express their beliefs without fear of ridicule or judgement.

Managing SP

Findings from the current study, mirroring results by Sharpless and Grom (2016), suggest that individuals expressed a preference for techniques to disrupt SP as it happens as opposed to more preventative methods. It is plausible that such preference is due to the sparse preventative methods available at present, in which there currently exists no established treatment methods for the prevention of SP (Sharpless & Grom, 2016; Solomonova, 2018). Although psychoanalysis, cognitive-behavioural therapy (CBT), hypnosis and education in sleep hygiene have been investigated in relation to SP, no empirical consensus on their efficacy is currently available (Sharpless & Doghramji, 2015). Moreover, these techniques require significant investment of time, energy and resources. Instead, individuals may prefer techniques they can easily implement on their own accord which also promote a sense of agency.

The biomedical approach tends to focus upon treating comorbidity by identifying potential underlying conditions (such as narcolepsy and psychopathology), so that the root-cause can be treated accordingly (Hinton, Pich, Chhean, & Pollack, 2005; Olunu et al., 2018; Solomonova, 2018). Due to the public stigma involving negative or discriminatory attitudes that others may have about mental illness, which many participants of the current study appeared acutely aware of,

presenting to a medical institution with SP in which individual's will be probed on underlying conditions appear unappealing for many experiencers. Additionally, some spiritually inclined participants expressed that visiting a medical institution would generally be considered as a last resort, due to potential interpretive differences between themselves and clinicians and the possibility of misdiagnosis.

While preventative measures such as improved sleep hygiene may be effective at reducing the frequency of SP, disruptive methods for dealing with ongoing SP experiences do exist. Considering most SP experiences are characterised by fear and unpleasant sensations, it is no surprise that the majority of participants attempted to disrupt the ongoing SP experience. Participants most commonly reported incremental bodily movement and surrendering to the experience as useful in this regard. These techniques align with findings from Sharpless & Grom (2016) who recommended that moving the extremities and self-monitoring (raising awareness and promoting calm) may be helpful during the SP episode. Essentially, it appears that attempting micro-movements rather than struggling against the experience are the most effective and most utilised strategies at disrupting ongoing SP experiences.

Numerous participants reported sleep avoidance following their SP experience due to the associated fear. This was a concerning finding, especially given the abundance of literature that suggests poor sleep quality may induce and exacerbate SP (Denis et al., 2015; Denis & Poerio, 2017; Hsieh et al., 2010; Ma et al., 2014b; Munezawa et al., 2011). Such findings suggest that some individuals are currently ill-equipped to manage the experience and as a result, are implementing techniques that are detrimental to wellbeing. This points toward the crucial need to increase awareness of SP, in which research within the area remains sparse (Rauf et al., 2023). Essentially, raising awareness of causes and methods to disrupt the experience (if distress is to arise), will better equip individuals to successfully manage SP.

Finally, numerous participants expressed the effective use of spiritual techniques (i.e. calling upon ancestors or other spiritual beings) to disrupt ongoing SP. Culture-bound rituals have been reported as effective by numerous other studies, such as reciting prayer (Hufford, 1982), making a sign of a cross with the tongue (Davies, 2003) and placing a pile of sand by the sleeper's bed (Jalal et al., 2015). While these are not commonly promoted within the scholarship of SP, with literature predominantly oriented toward a scientific perspective, findings from the current study suggest calling for spiritual support may be a useful strategy for those who subscribe to spiritual worldviews.

Implications

Findings of the current study indicate the importance of acknowledging diverse perspectives of phenomena within research, especially within multicultural populations such as Aotearoa New Zealand. Current statistics continue to convey wide health differences and

disparities between Māori and non-Māori (Gibson et al., 2020; Ladyman et al., 2021; Muller et al., 2020; Signal et al., 2022) in addition to sleep inequities among racial/ethnic minority groups (Grandner et al., 2016; Hale et al., 2020). Scientific disciplines which are often firmly grounded within an inflexible "monocultural Western tradition" (Waitoki et al., 2018, p. 6) often disregard spiritual elements, considering spiritual components incapable of coping with human problems (Akena, 2012; Bishop, 2011). Regarding the current study, Māori, Pasifika and some Asian participants reported an opposition to Western conceptualisations of SP, further supporting the need for cultural diversity and the incorporation of a spiritual framework within both research and clinical contexts. As highlighted by Bishop et al. (2002), understanding the worldviews of the targeted community is imperative if we are "to do more good than harm" (p. 5).

Within clinical contexts, spiritual and cultural constructions are often withheld due to fears of being ascribed more severe forms of psychopathology (Lapsley et al., 2002; Lyndon, 1983; Taitimu et al., 2018). Consequently, this is one of numerous barriers between Māori and mental health services, which currently are under-utilised by our Indigenous communities (Patterson et al., 2018). Findings from the current study suggest that clinical contexts were considered the last resort for spiritually inclined participants, due to interpretive differences and ineffective, poorly aligned treatment recommendations. Rather than a one-size-fits all application of Western psychological theories and subsequent treatment approaches, exploration into healing within the cultural context of the client may be of great benefit (Moodley et al., 2008). Essentially, without exploration of the client's cultural world and meanings attributed to certain experiences, clinicians run the risk of imposing Western ideologies onto a relatively healthy client, which may cause further harm.

Findings suggested that numerous participants questioned their mental sanity following experiences of SP which appeared to elicit further anxiety following the event. As research suggests, such anxiety is increased within societies that frame such experiences as "a sign of madness" (Rabeyron, 2022, p. 11), with societal stigma suppressing reports, placing a barrier between experiencers and clinical support in addition to causing many to feel shame and embarrassment in the wake of episodes (Neal et al., 1994; Otto et al., 2006). In this regard, de-pathologising of the experience is urgently needed. At the clinical level, this may involve the clinician reassuring the individual regarding the nature of their experiences, such as explaining to the individual that their experience is not indicative of psychopathology and that many around the globe have reported similar events. Essentially, simple reassurance by a clinician could eventuate in a positive clinical impact (Sharpless, 2016) - creating a safe space for individuals to discuss their experiences, normalising phenomena such as SP and thus, reducing the negative impacts of societal stigma.

Finally, the current study shed light on the most utilised techniques used by participants to manage their SP. While the current method to addressing post-experience distress is biomedically framed, that is clinicians probing into underlying conditions, participants largely expressed a

preference toward disruptive techniques that could be implemented on their own accord. It appears disruptive techniques were compatible with both scientific and spiritual worldviews, as for spiritually inclined participants, the experience was not conceptualised as one to be 'treated'. Techniques such as acceptance (i.e. not fighting against the paralysis), incremental movement and calling for spiritual support were commonly endorsed as effective, and are likely to benefit others.

To increase accessibility of these strategies, this may involve educating clinicians on how to appropriately address and support patients through the use of a designated module on SP. This module may incorporate core components of Psychodynamic Psychotherapy focused on Anomalous Experiences (PPAE) such as: phenomenological exploration (how the individual describes their experience), subjective inscription (how the individual "feels" the experience) and subjective integration (how the individual understands the experience) (Rabeyron, 2022). Following a holistic investigation of the patient's inner world, the clinician could be educated on effective techniques to managing SP, including the importance of recommending culturally appropriate treatment options. This may include sleep hygiene education if the patient's main concern is sleep quality, or the recommendation of spiritual solutions in the context of spiritual patients.

Limitations and Future Directions

Regarding the limitations of the current study, the relatively small sample size of 12 participants must be acknowledged. Although qualitative research is more concerned with depth as opposed to breadth of understanding (Huberman & Miles, 1994; Palinkas et al., 2015), more details pertaining to phenomenological features, interpretive models and subsequent coping strategies may have been gleaned from increasing the pool of participants. Additionally, the age-range of participants was relatively limited, with the majority of participants presenting in their 20's. It is possible that older participants may have held different beliefs surrounding SP. Ness (1978) found older participants emphasised different contributing causes to the onset of SP than younger members of the study.

Due to time and cost constraints, each participant was provided with one interview opportunity to share their perceptions surrounding SP. Although this provided a foundation for understanding SP within the local context, serial interviews may have been useful for multiple reasons. Firstly, one-off interviews only captured information at a single point in time. As this is not always sufficient, it may have been worthwhile to employ follow-up interview(s) in order to capture longitudinal change (Read, 2018). Additionally, building rapport over several interviews may have been beneficial to gain trust and capture a richer understanding. As interviewees can be expected to become more trusting and confiding in successive interview sessions (Read, 2018), subsequent interviews may have strengthened the researcher-participant relationship in which more information may have been captured as a result.

While the current study analysed and interpreted findings through one researcher, investigator triangulation may have proved beneficial in regard to maximising validity of the project (Flick, 2004). Investigator triangulation, which refers to the use of more than one investigator, interviewer or data analyst, may have provided multiple observations and conclusions and thus, resulted in a more comprehensive understanding of the phenomenon (Archibald, 2016). Although this perspective is somewhat contentious, in which some researchers believe that the approach will result in a different set of data rather than enhanced accuracy (Braun & Clarke, 2023), some may find this approach useful. Essentially, examining findings through multiple lenses may have drawn more insight that can be gleaned from one researcher alone thus, may have provided more breadth and a more complete picture of the research topic.

The current study sought to provide a foundation for understanding SP within Aotearoa New Zealand. As the current project highlighted interpretive differences of SP, especially by Indigenous Māori, it is likely there are many more within the current context who share such perspectives. In this regard, future research should seek to deepen the knowledge surrounding the ways in which Māori understand the phenomenon, in addition to how potential distress is effectively managed from this lens. As found within the current study, a spiritual response such as access to tōhunga, kaumātua and/or cultural advisors may be a more effective and culturally responsive intervention to addressing post-experience distress (Lindsay et al., 2022)**.** As the provision in article four of Te Tiriti ensures the protection, normalisation and legitimisation of te ao wairua, integration of Māori spiritual and healing practices into policy to the same degree as non-Māori practices is paramount. Further research within this area could contribute to the knowledge of culturally diverse interpretative frameworks applied to the experience, whilst also extending the incorporation of spiritual explanatory frameworks into the area of sleep health. In addition, further studies dedicated to Pasifika and Asian perspectives within Aotearoa NZ are also recommended, as findings also suggested interpretive differences within these groups. As both groups constitute a significant portion of the local population, whilst Asian populations are also the fastest growing cohort within NZ (StatsNZ, 2013, 2019), further exploration into interpretive differences within these groups may prove beneficial.

With some participants reporting long-term and beneficial aftereffects in the years following their SP, future research may seek to extend the knowledge of positive SP experiences. This may involve a longitudinal study, where SP is conceptualised in terms of an 'Exceptional Experience' (EE) - experiences that deviate from accepted norms of secular Western reality, that have the potential for beneficial aftereffects when adequately integrated into the experiencer's life (Lindsay et al., 2021). Such research may facilitate knowledge on the long-term benefit of SP, that is often seen with other anomalous or spiritual phenomena such as Near-Death Experiences (NDEs) (Noyes Jr et al., 2009), After Death Communication (ADCs) (Beischel et al., 2014), mystical experiences (Woollacott & Shumway-Cook, 2020) and out-of-body experiences (OBEs) (Shaw et al., 2023)**.** Not only could such research challenge the pathological narrative that currently surrounds the phenomenon, but also support individuals to re-frame their experience – showing experiencers

that the event can be positively integrated in a way that promotes positive psychological or spiritual transformation.

At present, there exists no standardised quantitative tool to assess the prevalence of SP. Instead, most researchers within the field evaluate lifetime prevalence rates through the use of self-report instruments that have not been extensively used nor have undergone psychometric testing (Sharpless & Doghramji, 2015). In this respect, future research may focus upon the development of an empirically based, quantitative tool to accurately measure lifetime instances of SP. As the current project sought to develop a foundational understanding of the phenomenon, this may support the initial generation of items for a questionnaire or survey. Future research may seek to construct a scale in which reliability and validity may be tested. Essentially, it appears the wide disparity of prevalence rates has led many researchers and clinicians to dismiss the experience as abnormal or misattribute SP as a symptom of another psychological construct. Thus, the development of a reliable scale may facilitate and advance understanding of SP, more accurately reflecting how rates differ across populations.

Building upon these findings with a quantitative study has numerous advantages, such as the ability to provide rich data and a comprehensive, holistic presentation of results (Fusch et al., 2018; Green et al., 2015). Essentially, the current qualitative study provided a framework, in which to "fine-tune" the questions to be asked within the quantitative phase (Fusch et al., 2018, p. 24). Thus, future research may seek to test the generalisability of findings through quantitative methods. As the current study unveiled general perceptions among a relatively small but varied sample size, a quantitative follow-up study would extend knowledge as to how many endorse each perspective. For instance, future studies may investigate how many within the local context subscribe to a spiritual perspective, biomedical perspective in addition to quantifying types of experiential features. Essentially, a quantitative follow-up study would enable further exploration of themes generated within the qualitative phase, resulting in a broader perspective of the research topic (Azorín & Cameron, 2010; Fearon & Laitin, 2008).

Chapter Six: Conclusion

The current research sought to explore the phenomenological characteristics of SP, in addition to how the experience is interpreted within Aotearoa New Zealand. As identified by the findings, presentations of SP continue to corroborate existing research, suggesting a global consistency of features. Generally, the experience included paralysis which was sometimes interpreted as physical restraint. Participants reported having an almost complete sense of awareness of their current environment, whilst the majority reported sensing, seeing, hearing and sometimes interacting with a perceived entity. The sense of consciousness in conjunction with a perceptual component resulted in a highly realistic experience for those affected, often eliciting great fear, helplessness and a general lack of control. Two major interpretive frameworks were identified: *Physiological Abnormality* and *Spiritual.* For those subscribing to a biomedical view, attributing SP to physiological dysfunction, the experience was generally seen as the result of stress or fatigue. Participants who endorsed spiritual causes however, viewed the experience in terms of symbolic connectedness with esoteric realms, not one to be prevented but to be explored and nurtured.

Findings demonstrate an urgent need to consider more diverse knowledge bases within the scholarship of SP and beyond. Interpretive differences were found by Māori, Pasifika and some Asian participants, calling for increased cultural diversity within both research and clinical contexts. Spiritually inclined participants often expressed that healthcare, largely influenced by a Western biomedical perspective, was the last port-of-call in terms of support. Whilst many expressed adequate support from spiritual means, exploration of healing within the cultural context of the client may be beneficial. Finally, management techniques endorsed by participants largely involved disruptive strategies as opposed to preventative. Effective methods involved both cognitive and spiritual techniques and knowledge of these are likely to benefit others. In this respect, an educational module for clinicians focused upon how to support patients with SP should be considered. To extend this knowledge, future research may further investigate sleep-related phenomena and spiritual experiences, especially those of Indigenous Māori. In doing so, such research would inform both research and clinical perspectives of sleep, allowing a safe environment for cultural constructions to be shared and acknowledged.

References

Abdel Haleem, M. A. S. (2008). The Qur'an: A new translation by MAS Abdel Haleem. *Oxford, UK. Oxford University Press*, *2*, 173.

Abdo, G. (2002). *No God but God: Egypt and the triumph of Islam*. Oxford University Press.

Akena, F. A. (2012). Critical analysis of the production of Western knowledge and its implications for Indigenous knowledge and decolonization. *Journal of Black Studies*, *43*(6), 599-619.

Al-Ashqar, U. S. (2003). The world of the jinn and devils in the light of the Qur'an and Sunnah. In: International Islamic Publishing House Columbia.

Alkaabi, S., Meyerovich, M. D., Yakubov, B., & Shapiro, C. M. (2018). Triggers of Parasomnias-What Sleep Experts Think? *Journal of Neurology and Psychiatric Disorders*, *1*(1).

Alvesson, M., & Sköldberg, K. (2017). *Reflexive methodology: New vistas for qualitative research*. sage.

American Academy of Sleep Medicine. (2005). *International classification of sleep disorders: Diagnostic coding manual* (2nd ed.).

American Academy of Sleep Medicine. (2014). *International Classification of sleep disorders: Diagnostic and coding manual* (3rd ed.). Darien, IL: American Academy of Sleep Medicine.

Archibald, M. M. (2016). Investigator triangulation: A collaborative strategy with potential for mixed methods research. *Journal of mixed methods research*, *10*(3), 228-250.

Arikawa, H., Templer, D. I., Brown, R., Cannon, W. G., & Thomas-Dodson, S. (1999). The structure and correlates of kanashibari. *The Journal of psychology*, *133*(4), 369-375.

Attarian, H. (2010). Treatment options for parasomnias. *Neurologic clinics*, *28*(4), 1089-1106.

Awadalla, A., Al-Fayez, G., Harville, M., Arikawa, H., Tomeo, M. E., Templer, D. I., & Underwood, R. (2004). Comparative prevalence of isolated sleep paralysis in Kuwaiti, Sudanese, and American college students. *Psychological reports*, *95*(1), 317-322.

Azorín, J. M., & Cameron, R. (2010). The application of mixed methods in organisational research: A literature review. *Electronic journal of business research methods*, *8*(2), pp95-105.

Beattie, H. (1918). Traditions and legends. Collected from the Natives of Murihiku.(Southland, New Zealand.) Part VIII.(Continued). *The Journal of the Polynesian Society*, *27*(3 (107), 137-161.

Beischel, J., Mosher, C., & Boccuzzi, M. (2014). The possible effects on bereavement of assisted after-death communication during readings with psychic mediums: A continuing bonds perspective. *OMEGA-Journal of Death and Dying*, *70*(2), 169-194.

Bell, C. C., Dixie-Bell, D. D., & Thompson, B. (1986). Panic attacks: relationship to isolated sleep paralysis.

Bell, C. C., Shakoor, B., Thompson, B., Dew, D., Hughley, E., Mays, R., & Shorter-Gooden, K. (1984). Prevalence of isolated sleep paralysis in black subjects. *Journal of the National Medical Association*, *76*(5), 501.

Berry, J. W. (2015). Global psychology: Implications for cross-cultural research and management. *Cross Cultural Management*.

Berry, J. W., Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (2002). *Cross-cultural psychology: Research and applications*. Cambridge University Press.

Best, E. (1922). *Spiritual and mental concepts of the Maori*. Dominion museum.

Bhawuk, D. P. S. (2003). Culture's influence on creativity: the case of Indian spirituality. *International Journal of Intercultural Relations*, *27*(1), 1-22.

Biber, S. H. (2016). *The practice of qualitative research: Engaging students in the research process*. SAGE Publications, Incorporated.

Binney, J. (1984). Myth and explanation in the Ringatū tradition: Some aspects of the leadership of Te Kooti Arikirangi Te Turuki and Rua Kēnana Hepetipa. *The Journal of the Polynesian Society*, *93*(4), 345-398.

Bishop, B. J., Higgins, D., Casella, F., & Contos, N. (2002). Reflections on practice: Ethics, race, and worldviews. *Journal of Community Psychology*, *30*(6), 611-621.

Bishop, R. (2011). Freeing Ourselves from Neo-Colonial Domination in Research: A Kaupapa Māori Approach to Creating Knowledge1. *Freeing ourselves*, 1-30.

Blackmore, S. (1998). Abduction by aliens or sleep paralysis? *Skeptical Inquirer*, *22*(3), 23-28.

Bloom, J. D., & Gelardin, R. D. (1983). Uqamairineq and uqumanigianiq: Eskimo sleep paralysis. In *The Culture-Bound Syndromes* (pp. 117-122). Springer.

Bollu, P. C., Goyal, M. K., Thakkar, M. M., & Sahota, P. (2018). Sleep Medicine: Parasomnias. *Missouri Medicine*, *115*(2), 169.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. sage.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2012). Thematic analysis. In *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological.* (pp. 57-71). American Psychological Association. https://doi.org/10.1037/13620-004

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research in sport, exercise and health*, *11*(4), 589-597.

Braun, V., & Clarke, V. (2021). *Thematic Analysis: A Practical Guide*. SAGE Publications. https://books.google.co.nz/books?id=mToqEAAAQBAJ

Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. *International Journal of Transgender Health*, *24*(1), 1-6.

Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic Analysis. In (pp. 843-860). Springer Singapore. https://doi.org/10.1007/978-981-10-5251-4_103

Brinkmann, S. (2014). Unstructured and semi-structured interviewing. *The Oxford handbook of qualitative research*, 277-299.

Cardeña, E., Lynn, S. J., & Krippner, S. (2017). The psychology of anomalous experiences: A rediscovery. *Psychology of Consciousness: Theory, Research, and Practice*, *4*(1), 4.

Carpenter, C. M., & Suto, M. (2008). *Qualitative research for occupational and physical therapists: A practical guide*. Wiley.

Cheyne, J. (2003). Sleep Paralysis and the Structure of Waking-Nightmare Hallucinations. *Dreaming*, *13*, 163-179. https://doi.org/10.1023/A:1025373412722

Cheyne, J. A. (2002). Situational factors affecting sleep paralysis and associated hallucinations: position and timing effects. *Journal of Sleep Research*, *11*(2), 169-177.

Cheyne, J. A. (2005). Sleep paralysis episode frequency and number, types, and structure of associated hallucinations. *Journal of Sleep Research*, *14*(3), 319-324.

Cheyne, J. A., & Girard, T. A. (2007). Paranoid delusions and threatening hallucinations: a prospective study of sleep paralysis experiences. *Consciousness and cognition*, *16*(4), 959-974.

Cheyne, J. A., & Girard, T. A. (2009). The body unbound: Vestibular–motor hallucinations and out-of-body experiences. *Cortex*, *45*(2), 201-215.

Cheyne, J. A., Newby-Clark, I. R., & Rueffer, S. D. (1999). Relations among hypnagogic and hypnopompic experiences associated with sleep paralysis. *Journal of Sleep Research*, *8*(4), 313-317. https://doi.org/10.1046/j.1365-2869.1999.00165.x

Cheyne, J. A., Newby-Clark, I. R., & Rueffer, S. D. (1999). Relations among hypnagogic and hypnopompic experiences associated with sleep paralysis. *Journal of Sleep Research*, *8*(4), 313-317.

Cheyne, J. A., & Pennycook, G. (2013a). Sleep Paralysis Postepisode Distress. *Clinical Psychological Science*, *1*(2), 135-148. https://doi.org/10.1177/2167702612466656

Cheyne, J. A., & Pennycook, G. (2013b). Sleep paralysis postepisode distress: Modeling potential effects of episode characteristics, general psychological distress, beliefs, and cognitive style. *Clinical Psychological Science*, *1*(2), 135-148.

Cheyne, J. A., Rueffer, S. D., & Newby-Clark, I. R. (1999). Hypnagogic and hypnopompic hallucinations during sleep paralysis: neurological and cultural construction of the night-mare. *Consciousness and cognition*, *8*(3), 319-337.

Christakis, A. N., & Harris, L. (2004). Designing a transnational indigenous leaders interaction in the context of globalization: a wisdom of the people forum. *Systems Research and Behavioral Science: The Official Journal of the International Federation for Systems Research*, *21*(3), 251-259.

Clancy, S. A., McNally, R. J., Schacter, D. L., Lenzenweger, M. F., & Pitman, R. K. (2002). Memory distortion in people reporting abduction by aliens. *Journal of Abnormal Psychology*, *111*(3), 455.

Clarke, V., & Braun, V. (2013). Successful qualitative research: A practical guide for beginners. *Successful Qualitative Research*, 1-400.

Conesa, J. (2000). Geomagnetic, cross-cultural and occupational faces of sleep paralysis: An ecological perspective. *Sleep and Hypnosis*, *2*(3), 248-254.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Daly, K. J. (2007). *Qualitative methods for family studies and human development*. Sage.

Davies, O. (2003). The nightmare experience, sleep paralysis, and witchcraft accusations. *Folklore*, *114*(2), 181-203.

De Jong, J. T. V. M. (2005). Cultural variation in the clinical presentation of sleep paralysis. *Transcultural psychiatry*, *42*(1), 78-92.

De Sa, J. F. R., & Mota-Rolim, S. A. (2016). Sleep paralysis in Brazilian folklore and other cultures: a brief review. *Frontiers in psychology*, *7*, 1294.

Denis, D. (2018). Relationships between sleep paralysis and sleep quality: current insights. *Nature and science of sleep*, *Volume 10*, 355-367. https://doi.org/10.2147/nss.s158600

Denis, D., French, C. C., & Gregory, A. M. (2018). A systematic review of variables associated with sleep paralysis. *Sleep Medicine Reviews*, *38*, 141-157. https://doi.org/10.1016/j.smrv.2017.05.005

Denis, D., French, C. C., Rowe, R., Zavos, H. M. S., Nolan, P. M., Parsons, M. J., & Gregory, A. M. (2015). A twin and molecular genetics study of sleep paralysis and associated factors. *Journal of Sleep Research*, *24*(4), 438-446. https://doi.org/10.1111/jsr.12282

Denis, D., & Poerio, G. L. (2017). Terror and bliss? Commonalities and distinctions between sleep paralysis, lucid dreaming, and their associations with waking life experiences. *Journal of Sleep Research*, *26*(1), 38-47. https://doi.org/10.1111/jsr.12441

Douglass, A. B. (2003). Narcolepsy: differential diagnosis or etiology in some cases of bipolar disorder and schizophrenia? *CNS spectrums*, *8*(2), 120-126.

Douglass, A. B., Hays, P., Pazderka, F., & Russell, J. M. (1991). Florid refractory schizophrenias that turn out to be treatable variants of HLA-associated narcolepsy. *Journal of Nervous and Mental Disease*.

Douglass, A. B., Shipley, J. E., Haines, R. F., Scholten, R. C., Dudley, E., & Tapp, A. (1993). Schizophrenia, narcolepsy, and HLA-DR15, DQ6. *Biological psychiatry*, *34*(11), 773-780.

Edinger, J. D., & Carney, C. E. (2014). *Overcoming insomnia: A cognitive-behavioral therapy approach, therapist guide*. Oxford University Press.

Eeles, J., Lowe, T., & Wellman, N. (2003). Spirituality or psychosis?—an exploration of the criteria that nurses use to evaluate spiritual-type experiences reported by patients. *International journal of nursing studies*, *40*(2), 197-206.

Everett, H. C. (1963). Sleep paralysis in medical students. *The Journal of Nervous and Mental Disease*, *136*(3), 283-287.

Evrard, R. (2007). La clinique parapsychologique. *Magma*, *5*(3).

Fa'alogo-Lilo, C., & Cartwright, C. (2021). Barriers and supports experienced by Pacific peoples in Aotearoa New Zealand's mental health services. *Journal of Cross-cultural psychology*, *52*(8-9), 752-770.

Fearon, J. D., & Laitin, D. D. (2008). Integrating qualitative and quantitative methods.

Feriante, J., & Singh, S. (2020). REM Rebound Effect.

Flick, U. (2004). Triangulation in qualitative research. *A companion to qualitative research*, *3*, 178-183.

Fukuda, K. (1993). One explanatory basis for the discrepancy of reported prevalences of sleep paralysis among healthy respondents. *Perceptual and Motor Skills*, *77*(3), 803-807.

Fukuda, K. (1994). Sleep paralysis and sleep-onset REM period in normal individuals.

Fukuda, K. (2005). Emotions during sleep paralysis and dreaming. *Sleep and Biological Rhythms*, *3*(3), 166-168. https://doi.org/10.1111/j.1479-8425.2005.00172.x

Fukuda, K., Miyasita, A., Inugami, M., & Ishihara, K. (1987). High prevalence of isolated sleep paralysis: Kanashibari phenomenon in Japan. *Sleep*, *10*(3), 279-286.

Fukuda, K., Ogilvie, R. D., & Takeuchi, T. (2000). Recognition of sleep paralysis among normal adults in Canada and in Japan. *Psychiatry and Clinical Neurosciences*, *54*(3), 292-293. https://doi.org/10.1046/j.1440-1819.2000.00683.x

Furbish, D. S., & Reid, L. (2003). Spirituality in Career from a New Zealand Maori Perspective.

Fusch, P., Fusch, G. E., & Ness, L. R. (2018). Denzin's paradigm shift: Revisiting triangulation in qualitative research. *Journal of Sustainable Social Change*, *10*(1), 2.

Galsgaard, M. (2021). Jinn Beliefs in Western Psychiatry: A Study of Three Cases from a Psychiatric and Cultural Perspective. In (pp. 185-213). Springer International Publishing. https://doi.org/10.1007/978-3-030-61247-4_10

Gangdev, P. (2004). Relevance of sleep paralysis and hypnic hallucinations to psychiatry. *Australasian Psychiatry*, *12*(1), 77-80.

Gangdev, P. (2006). Comments on sleep paralysis. *Transcultural psychiatry*, *43*(4), 692-694.

Gibson, R., Gander, P., Kepa, M., Moyes, S., & Kerse, N. (2020). Self-reported sleep problems and their relationship to life and living of Māori and non-Māori in advanced age. *Sleep Health*, *6*(4), 522-528.

Girard, T. A., & Cheyne, J. A. (2004). Spatial characteristics of hallucinations associated with sleep paralysis. *Cognitive Neuropsychiatry*, *9*(4), 281-300.

Goldie, W. H. (1904). Maori medical Lore: Transactions and proceedings of the Royal society of New Zealand. *National Library of New Zealand [electronic source]*, *37*, 92-101.

Goode, G. B. (1962). Sleep paralysis. *Archives of Neurology*, *6*(3), 228-234.

Gordon, S. (2015). Medical condition, demon or undead corpse? Sleep paralysis and the nightmare in medieval Europe. *Social History of Medicine*, *28*(3), 425-444.

Grandner, M. A., Williams, N. J., Knutson, K. L., Roberts, D., & Jean-Louis, G. (2016). Sleep disparity, race/ethnicity, and socioeconomic position. *Sleep Medicine*, *18*, 7-18.

Green, C. A., Duan, N., Gibbons, R. D., Hoagwood, K. E., Palinkas, L. A., & Wisdom, J. P. (2015). Approaches to mixed methods dissemination and implementation research: methods, strengths, caveats, and opportunities. *Administration and policy in mental health and mental health services research*, *42*, 508-523.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, *18*(1), 59-82.

Guilleminault, C., Raynal, D., Takahashi, S., Carskadon, M., & Dement, W. (1976). Evaluation of short-term and long-term treatment of the narcolepsy syndrome with clomipramine hydrochloride. *Acta Neurologica Scandinavica*, *54*(1), 71-87.

Haami, D., Gibson, R., Lindsay, N., & Tassell-Mataamua, N. (2023). *Kei te moe te tinana, kei te oho te wairua - As the body sleeps, the spirit awakens: Exploring the spiritual experiences of contemporary Māori associated with sleep*.

Hale, L., Troxel, W., & Buysse, D. J. (2020). Sleep health: an opportunity for public health to address health equity. *Annual review of public health*, *41*, 81-99.

Hart, M. A. (2010). Indigenous worldviews, knowledge, and research: The development of an indigenous research paradigm. *Journal of Indigenous Social Development*, *1*(1A).

Hennink, M., & Kaiser, B. N. (2021). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, 114523.

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523.

Hesse-Biber, S. N., & Piatelli, D. (2012). The feminist practice of holistic reflexivity. *Handbook of feminist research: Theory and praxis*, *2*, 557-582.

Hinton, D. E., Hufford, D. J., & Kirmayer, L. J. (2005). Culture and sleep paralysis. *42*, 5-10.

Hinton, D. E., Pich, V., Chhean, D., & Pollack, M. H. (2005). 'The ghost pushes you down': sleep paralysis-type panic attacks in a Khmer refugee population. *Transcultural psychiatry*, *42*(1), 46-77.

Hinton, D. E., Pich, V., Chhean, D., Pollack, M. H., & McNally, R. J. (2005). Sleep paralysis among Cambodian refugees: association with PTSD diagnosis and severity. *Depression and Anxiety*, *22*(2), 47-51. https://doi.org/10.1002/da.20084

Hishikawa, Y. (1978). Characteristics of REM sleep accompanied by sleep paralysis and hypnagogic hallucinations in narcoleptic patients. *Waking & Sleeping*.

Hishikawa, Y., Ida, H., Nakai, K., & Kaneko, Z. (1966). Treatment of narcolepsy with imipramine (tofranil) and desmethylimipramine (pertofran). *Journal of the Neurological Sciences*, *3*(5), 453-461.

Hishikawa, Y., & Kaneko, Z. (1965). Electroencephalographic study on narcolepsy. *Electroencephalography and Clinical Neurophysiology*, *18*(3), 249-259.

Hishikawa, Y., & Shimizu, T. (1995). Physiology of REM sleep, cataplexy, and sleep paralysis. *Advances in neurology*, *67*, 245-271.

Hsieh, S.-W., Lai, C.-L., Liu, C.-K., Lan, S.-H., & Hsu, C.-Y. (2010). Isolated sleep paralysis linked to impaired nocturnal sleep quality and health-related quality of life in Chinese-Taiwanese patients with obstructive sleep apnea. *Quality of Life Research*, *19*(9), 1265-1272. https://doi.org/10.1007/s11136-010-9695-4

Huberman, A. M., & Miles, M. B. (1994). An expanded sourcebook: Qualitative data analysis. *Sage Publications. USA*, *300*, 13-25.

Hudson, J. I., Manoach, D. S., Sabo, A. N., & Sternbach, S. E. (1991). Recurrent nightmares in posttraumatic stress disorder: association with sleep paralysis, hypnopompic hallucinations, and REM sleep. *Journal of Nervous and Mental Disease*.

Hufford, D. (1982). *The terror that comes in the night: An experience-centered study of supernatural assault traditions* (Vol. 7). University of Pennsylvania Press.

Hufford, D. J. (2005). Sleep paralysis as spiritual experience. *Transcultural psychiatry*, *42*(1), 11-45.

Hurd, R. (2010). *Sleep paralysis: A guide to hypnagogic visions & visitors of the night*. Hyena Press.

Jalal, B. (2016). How to make the ghosts in my bedroom disappear? Focused-attention meditation combined with muscle relaxation (MR therapy)—a direct treatment intervention for sleep paralysis. *Frontiers in psychology*, 28.

Jalal, B. (2018). The neuropharmacology of sleep paralysis hallucinations: serotonin 2A activation and a novel therapeutic drug. *Psychopharmacology*, *235*(11), 3083-3091. https://doi.org/10.1007/s00213-018-5042-1

Jalal, B., & Hinton, D. E. (2013). Rates and Characteristics of Sleep Paralysis in the General Population of Denmark and Egypt. *Culture, Medicine, and Psychiatry*, *37*(3), 534-548. https://doi.org/10.1007/s11013-013-9327-x

Jalal, B., & Hinton, D. E. (2015). Sleep paralysis among Egyptian college students: Association with anxiety symptoms (PTSD, trait anxiety, pathological worry). *The Journal of Nervous and Mental Disease*, *203*(11), 871-875.

Jalal, B., & Ramachandran, V. S. (2014). Sleep paralysis and "the bedroom intruder": The role of the right superior parietal, phantom pain and body image projection. *Medical Hypotheses*, *83*(6), 755-757. https://doi.org/10.1016/j.mehy.2014.10.002

Jalal, B., & Ramachandran, V. S. (2017). Sleep Paralysis, "The Ghostly Bedroom Intruder" and Out-of-Body Experiences: The Role of Mirror Neurons [Opinion]. *Frontiers in Human Neuroscience*, *11*. https://doi.org/10.3389/fnhum.2017.00092

Jalal, B., Romanelli, A., & Hinton, D. E. (2015). Cultural Explanations of Sleep Paralysis in Italy: The Pandafeche Attack and Associated Supernatural Beliefs. *Culture, Medicine, and Psychiatry*, *39*(4), 651-664. https://doi.org/10.1007/s11013-015-9442-y

Jalal, B., Romanelli, A., & Hinton, D. E. (2021). Sleep paralysis in Italy: Frequency, hallucinatory experiences, and other features. *Transcultural psychiatry*, *58*(3), 427-439. https://doi.org/10.1177/1363461520909609

Jalal, B., Sevde Eskici, H., Acarturk, C., & Hinton, D. E. (2021). Beliefs about sleep paralysis in Turkey: Karabasan attack. *Transcultural psychiatry*, *58*(3), 414-426. https://doi.org/10.1177/1363461520909616

Jalal, B., Simons-Rudolph, J., Jalal, B., & Hinton, D. E. (2014). Explanations of sleep paralysis among Egyptian college students and the general population in Egypt and Denmark. *Transcultural psychiatry*, *51*(2), 158-175.

Jones, E. (1931). On the nightmare. (London: Hogarth Press)

Kennedy, V., Cram, F., Paipa, K., Pipi, K., & Baker, M. (2015). Wairua and cultural values in evaluation. *Evaluation Matters—He Take Tō Te Aromatawai*, *1*, 83-111.

Koenig, H. G. (2007). Religion, spirituality and psychotic disorders. *Archives of Clinical Psychiatry (São Paulo)*, *34*, 95-104.

Koran, L. M., & Raghavan, S. (1993). Fluoxetine for isolated sleep paralysis. *Psychosomatics: Journal of Consultation and Liaison Psychiatry*.

Kornum, B. R., Knudsen, S., Ollila, H. M., Pizza, F., Jennum, P. J., Dauvilliers, Y., & Overeem, S. (2017). Narcolepsy. *Nature Reviews Disease Primers*, *3*(1), 16100. https://doi.org/10.1038/nrdp.2016.100

Ladyman, C., Signal, T. L., Sweeney, B., Jefferies, M., Gander, P., Paine, S.-J., & Huthwaite, M. (2021). Multiple dimensions of sleep are consistently associated with chronically elevated

depressive symptoms from late pregnancy to 3 years postnatal in Indigenous and non-Indigenous New Zealand women. *Australian & New Zealand Journal of Psychiatry*, *55*(7), 687-698.

Lapsley, H., Nikora, L. W., & Black, R. M. (2002). *" Kia Mauri Tau!" Narratives of recovery from disabling mental health problems*. Mental Health Commission.

Laughlin, V. A. (2015). A Brief Overview of al Jinn within Islamic Cosmology and Religiosity. *Journal of Adventist Mission Studies*, *11*(1), 067-078.

Law, S., & Kirmayer, L. J. (2005). Inuit interpretations of sleep paralysis. *Transcultural psychiatry*, *42*(1), 93-112.

Levitt, H. M. (2020). What does it all mean? The discussion section. In *Reporting qualitative research in psychology: How to meet APA Style Journal Article Reporting Standards., Revised Edition.* (pp. 83-89). American Psychological Association. https://doi.org/10.1037/0000179-007

Liamputtong, P. (2020). *Qualitative research methods*.

Liamputtong, P., & Ezzy, D. (2005). *Qualitative research methods. Second*. Melbourne: Oxford university press.

Lim, A., Hoek, H. W., & Blom, J. D. (2015). The attribution of psychotic symptoms to jinn in Islamic patients. *Transcultural psychiatry*, *52*(1), 18-32.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. sage.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. *The Sage handbook of qualitative research*, *4*(2), 97-128.

Lindsay, N., Haami, D., Tassell-Matamua, N., Pomare, P., Valentine, H., Pahina, J., Ware, F., & Pidduck, P. (2022). The spiritual experiences of contemporary Māori in Aotearoa New Zealand: A qualitative analysis. *Journal of Spirituality in Mental Health*, *24*(1), 74-94.

Lindsay, N., Tassell-Matamua, N., Haami, D., Ware, F., Valentine, H., & Pomare, P. (2021). Construction of a 'Beliefs about Exceptional Experiences Scale'(BEES): Implications of preliminary findings in Aotearoa New Zealand. *Journal for the Study of Spirituality*, *11*(2), 145-158.

Lyndon, C. G. (1983). *Beliefs in Tapu, Mate Maori, and Makutu and the Relevance of These Beliefs to the Diagnosis of Mental Illness Amongst the Maori*. University of Auckland.

Lyons, A. C., & Chamberlain, K. (2006). *Health psychology: A critical introduction*. Cambridge University Press.

Ma, S., Wu, T., & Pi, G. (2014a). Sleep paralysis in Chinese adolescents: a representative survey. *Sleep and Biological Rhythms*, *12*, 46-52.

Ma, S., Wu, T., & Pi, G. (2014b). Sleep paralysis in Chinese adolescents: A representative survey. *Sleep and Biological Rhythms*, *12*(1), 46-52. https://doi.org/10.1111/sbr.12045

Mack, J. E., Hopkins, B., Jacobs, D. M., & Westrum, R. (1992). *Unusual personal experiences: An analysis of the data from three national surveys conducted by the Roper organization*. Bigelow Holding Corporation.

Madill, A., & Gough, B. (2008). Qualitative research and its place in psychological science. *Psychological methods*, *13*(3), 254.

Mapp, T. (2008). Understanding phenomenology: The lived experience. *British Journal of Midwifery*, *16*(5), 308-311.

Mark, G. T., & Lyons, A. C. (2010). Maori healers' views on wellbeing: The importance of mind, body, spirit, family and land. *Social Science & Medicine*, *70*(11), 1756-1764.

Mason, J. (2017). *Qualitative researching*. sage.

Mazzocchi, F. (2006). Western science and traditional knowledge: Despite their variations, different forms of knowledge can learn from each other. *EMBO reports*, *7*(5), 463-466.

McIntosh, M. J., & Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global qualitative nursing research*, *2*, 2333393615597674.

McNally, R. J., & Clancy, S. A. (2005). Sleep paralysis, sexual abuse, and space alien abduction. *Transcultural psychiatry*, *42*(1), 113-122.

Merrik, E. (1999). An exploration of Quality in Qualitative Research. *Kopola, M. and Suzuki (eds), Using Qualitative Methods in Psychology, London, Sage*.

Mitler, M. M., Hajdukovic, R., Erman, M., & Koziol, J. A. (1990). Narcolepsy. *Journal of Clinical Neurophysiology*, *7*(1), 93-118. https://doi.org/10.1097/00004691-199001000-00008

Moodley, R., Sutherland, P., & Oulanova, O. (2008). Traditional healing, the body and mind in psychotherapy. *Counselling Psychology Quarterly*, *21*(2), 153-165.

Moreira-Almeida, A., & Cardeña, E. (2011). Differential diagnosis between non-pathological psychotic and spiritual experiences and mental disorders: a contribution from Latin American studies to the ICD-11. *Brazilian Journal of Psychiatry*, *33*, s21-s28.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of counseling psychology*, *52*(2), 250.

Morse, J. M., & Field, P. A. (1995). *Qualitative research methods for health professionals*.

Muller, D., Paine, S.-J., Wu, L. J., & Signal, T. L. (2020). Sleep timing and sleep problems of preschoolers in Aotearoa/New Zealand: relationships with ethnicity and socioeconomic position. *Sleep Medicine*, *76*, 1-9.

Munezawa, T., Kaneita, Y., Osaki, Y., Kanda, H., Ohtsu, T., Suzuki, H., Minowa, M., Suzuki, K., Higuchi, S., Mori, J., & Ohida, T. (2011). Nightmare and sleep paralysis among Japanese adolescents: A nationwide representative survey. *Sleep Medicine*, *12*(1), 56-64. https://doi.org/10.1016/j.sleep.2010.04.015

Munezawa, T., Kaneita, Y., Yokoyama, E., Suzuki, H., & Ohida, T. (2009). Epidemiological study of nightmare and sleep paralysis among Japanese adolescents. *Sleep and Biological Rhythms*, *7*(3), 201-210. https://doi.org/10.1111/j.1479-8425.2009.00404.x

Neal, A. M., Rich, L. N., & Smucker, W. D. (1994). The Presence of Panic Disorder among African American Hypertensives: A Pilot Study. *Journal of Black Psychology*, *20*(1), 29-35. https://doi.org/10.1177/00957984940201003

Neal-Barnett, A. M., & Crowther, J. H. (2000). To be female, middle class, anxious, and Black. *Psychology of Women Quarterly*, *24*(2), 129-136.

Ness, R. C. (1978). The old hag phenomenon as sleep paralysis: A biocultural interpretation. *Culture, Medicine and Psychiatry*, *2*(1), 15-39. https://doi.org/10.1007/bf00052448

Ngata, R. S. (2014). Understanding matakite: A Kaupapa Māori study on the impact of matakite/intuitive experiences on wellbeing: A thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Māori Studies at Massey University, Papa-i-ōea, Aotearoa.

NiaNia, W., Bush, A., & Epston, D. (2019). He korowai o ngā tīpuna: Voice hearing and communication from ancestors. *Australasian Psychiatry*, *27*(4), 345-347.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International journal of qualitative methods*, *16*(1), 1609406917733847.

Noyes Jr, R., Fenwick, P., Holden, J. M., & Christian, S. R. (2009). Aftereffects of pleasurable Western adult near-death experiences.

Ohaeri, J. U., Adelekan, M., Odejide, A., & Ikuesan, B. (1992). The pattern of isolated sleep paralysis among Nigerian nursing students. *Journal of the National Medical Association*, *84*, 67-70.

Ohaeri, J. U., Awadalla, A., Makanjuola, V. A., & Ohaeri, B. M. (2004). Features of isolated sleep paralysis among Nigerians. *East African medical journal*, *81*(10), 509-519.

Ohayon, M. M., Priest, R. G., Zulley, J., Smirne, S., & Paiva, T. (2002). Prevalence of narcolepsy symptomatology and diagnosis in the European general population. *Neurology*, *58*(12), 1826-1833.

Ohayon, M. M., & Shapiro, C. M. (2000). Sleep disturbances and psychiatric disorders associated with posttraumatic stress disorder in the general population. *Comprehensive Psychiatry*, *41*(6), 469-478. https://doi.org/https://doi.org/10.1053/comp.2000.16568

Ohayon, M. M., Zulley, J., Guilleminault, C., & Smirne, S. (1999). Prevalence and pathologic associations of sleep paralysis in the general population. *Neurology*, *52*(6), 1194-1194.

Olry, R., & Haines, D. E. (2014). Kanashibari (金縛り): A ghost's business. *Journal of the History of the Neurosciences*, *23*(2), 192-197.

Olunu, E., Kimo, R., Onigbinde, E. O., Akpanobong, M.-A. U., Enang, I. E., Osanakpo, M., Monday, I. T., Otohinoyi, D. A., & John Fakoya, A. O. (2018). Sleep Paralysis, a Medical Condition with a Diverse Cultural Interpretation. *International journal of applied & basic medical research*, *8*(3), 137-142. https://doi.org/10.4103/ijabmr.IJABMR_19_18

Otto, M. W., Simon, N. M., Powers, M., Hinton, D., Zalta, A. K., & Pollack, M. H. (2006). Rates of isolated sleep paralysis in outpatients with anxiety disorders. *Journal of Anxiety Disorders*, *20*(5), 687-693.

Padgett, D. K. (2016). *Qualitative methods in social work research* (Vol. 36). Sage publications.

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and policy in mental health and mental health services research*, *42*(5), 533-544.

Paradis, C., Friedman, S., Hinton, D. E., McNally, R. J., Solomon, L. Z., & Lyons, K. A. (2009). The Assessment of the Phenomenology of Sleep Paralysis: The Unusual Sleep Experiences Questionnaire (USEQ). *CNS Neuroscience & Therapeutics*, *15*(3), 220-226. https://doi.org/10.1111/j.1755-5949.2009.00098.x

Paradis, C. M., & Friedman, S. (2005). Sleep paralysis in African Americans with panic disorder. *Transcultural psychiatry*, *42*(1), 123-134.

Parker, J. D., & Blackmore, S. J. (2002). Comparing the content of sleep paralysis and dream reports. *Dreaming*, *12*(1), 45-59.

Patel, A. K., Reddy, V., & Araujo, J. F. (2021). Physiology, sleep stages. In *StatPearls [Internet]*. StatPearls Publishing.

Patterson, R., Durie, M., Disley, B., & Tiatia-Seath, S. (2018). He Ara Oranga: Report of the government inquiry into mental health and addiction.

Penn, N. E., Kripke, D. F., & Scharff, J. (1981). Sleep paralysis among medical students. *The Journal of psychology*, *107*(2), 247-252.

Plante, D. T., & Winkelman, J. W. (2008). Parasomnias: psychiatric considerations. *Sleep Medicine Clinics*, *3*(2), 217-229.

Plante, T. G. (2016). Principles of incorporating spirituality into professional clinical practice. *Practice Innovations*, *1*(4), 276.

Powell, R. A., & Nielsen, T. A. (1998). Was Anna O.'s black snake hallucination a sleep paralysis nightmare? Dreams, memories, and trauma. *Psychiatry*, *61*(3), 239-248.

Punch, K. (2000). *Developing effective research proposals*. Sage.

Rabeyron, T. (2022). When the truth is out there: counseling people who report anomalous experiences. *Frontiers in psychology*, *12*, 5918.

Ramsawh, H. J., Raffa, S. D., White, K. S., & Barlow, D. H. (2008). Risk Factors for Isolated Sleep Paralysis in an African American Sample: A Preliminary Study. *Behavior Therapy*, *39*(4), 386-397. https://doi.org/https://doi.org/10.1016/j.beth.2007.11.002

Rauf, B., Sharpless, B. A., Denis, D., Perach, R., Madrid-Valero, J. J., French, C. C., & Gregory, A. M. (2023). Isolated sleep paralysis: Clinical features, perception of aetiology, prevention and disruption strategies in a large international sample. *Sleep Medicine*.

Raworth, K., Sweetman, C., Narayan, S., Rowlands, J., & Hopkins, A. (2012). *Conducting semi-structured Interviews*. Oxfam.

Read, B. L. (2018). Serial interviews: When and why to talk to someone more than once. *International journal of qualitative methods*, *17*(1), 1609406918783452.

Robinson, O. C. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative research in psychology*, *11*(1), 25-41.

Rossman, G. B., & Rallis, S. F. (2017). *An Introduction to Qualitative Research: Learning in the Field* (Fourth ed.) https://doi.org/10.4135/9781071802694

Roxburgh, E. C., & Evenden, R. E. (2016). 'Most people think you're a fruit loop': Clients' experiences of seeking support for anomalous experiences. *Counselling and Psychotherapy Research*, *16*(3), 211-221.

Schredl, M., & Doll, E. (1998). Emotions in diary dreams. *Consciousness and cognition*, *7*(4), 634-646.

Shapiro, B., & Spitz, H. (1976). Problems in the differential diagnosis of narcolepsy versus schizophrenia. *The American Journal of Psychiatry*, *133*(11), 1321-1323.

Sharpless, B. (2016). A clinician's guide to recurrent isolated sleep paralysis. *Neuropsychiatric Disease and Treatment*, *Volume 12*, 1761-1767. https://doi.org/10.2147/ndt.s100307

Sharpless, B. A. (2015). Isolated sleep paralysis and affect. *Sleep and Affect*, 181-199.

Sharpless, B. A., & Barber, J. P. (2011). Lifetime prevalence rates of sleep paralysis: A systematic review. *Sleep Medicine Reviews*, *15*(5), 311-315. https://doi.org/10.1016/j.smrv.2011.01.007

Sharpless, B. A., & Doghramji, K. (2015). *Sleep paralysis: historical, psychological, and medical perspectives*. Oxford University Press.

Sharpless, B. A., & Grom, J. L. (2013). Isolated sleep paralysis: Prevention, disruption, and hallucinations of others (poster). American Psychological Association Annual Conference, Honolulu, Hawaii.

Sharpless, B. A., & Grom, J. L. (2016). Isolated Sleep Paralysis: Fear, Prevention, and Disruption. *Behavioral Sleep Medicine*, *14*(2), 134-139. https://doi.org/10.1080/15402002.2014.963583

Sharpless, B. A., & Kliková, M. (2019). Clinical features of isolated sleep paralysis. *Sleep Medicine*, *58*, 102-106.

Sharpless, B. A., McCarthy, K. S., Chambless, D. L., Milrod, B. L., Khalsa, S.-R., & Barber, J. P. (2010). Isolated sleep paralysis and fearful isolated sleep paralysis in outpatients with panic attacks. *Journal of Clinical Psychology*, *66*(12), 1292-1306. https://doi.org/10.1002/jclp.20724

Shaw, J., Gandy, S., & Stumbrys, T. (2023). Transformative effects of spontaneous out of body experiences in healthy individuals: An interpretative phenomenological analysis. *Psychology of Consciousness: Theory, Research, and Practice*.

Shinebourne, P. (2011). The Theoretical Underpinnings of Interpretative Phenomenological Analysis (IPA). *Existential Analysis: Journal of the Society for Existential Analysis*, *22*(1).

Signal, T. L., Sweeney, B. M., Muller, D. P., Ladyman, C. I., Wu, L., & Paine, S.-J. (2022). Moe Kura: a longitudinal study of mother and child sleep and well-being in Aotearoa New Zealand. *Journal of the Royal Society of New Zealand*, *52*(3), 283-300.

Sim, J., & Wright, C. (2000). *Research in health care: concepts, designs and methods*. Nelson Thornes.

Simard, V., & Nielsen, T. A. (2005). Sleep paralysis-associated sensed presence as a possible manifestation of social anxiety. *Dreaming*, *15*(4), 245.

Sleep Disorders Classifaction Committee. (1979). Associaion of Sleep Disorders Centers. *Diagnostic classification of sleep arousal disorders*, *Sleep, 2*([entire issue]).

Smith, L. T. (2021). *Decolonizing methodologies: Research and indigenous peoples*. Bloomsbury Publishing.

Snyder, S. (1983). Isolated sleep paralysis after rapid time zone change (" jet lag") syndrome. *Chronobiologia*.

Solomonova, E. (2018). 31 Sleep Paralysis: Phenomenology, Neurophysiology, and Treatment. *The Oxford Handbook of Spontaneous Thought: Mind-Wandering, Creativity, and Dreaming*, 435.

Solomonova, E., Nielsen, T., Stenstrom, P., Simard, V., Frantova, E., & Donderi, D. (2008). Sensed presence as a correlate of sleep paralysis distress, social anxiety and waking state social imagery. *Consciousness and cognition*, *17*(1), 49-63.

Spanos, N. P., Cross, P. A., Dickson, K., & DuBreuil, S. C. (1993). Close encounters: An examination of UFO experiences. *Journal of Abnormal Psychology*, *102*(4), 624.

Spanos, N. P., McNulty, S. A., DuBreuil, S. C., Pires, M., & Burgess, M. F. (1995). The frequency and correlates of sleep paralysis in a university sample. *Journal of Research in Personality*, *29*(3), 285-305.

Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research*, *17*(10), 1372-1380.

StatsNZ. (2013). *Census of Population and Dwellings*. Retrieved from https://www.stats.govt.nz/census/previous-censuses/2013-census/

StatsNZ. (2019). *New Zealand's population reflects growing diversity*. Retrieved from https://www.stats.govt.nz/news/new-zealands-population-reflects-growing-diversity

Stefani, A., & Högl, B. (2021). Nightmare Disorder and Isolated Sleep Paralysis. *Neurotherapeutics*, *18*(1), 100-106. https://doi.org/10.1007/s13311-020-00966-8

Stewart, C. (2002). Erotic Dreams And Nightmares From Antiquity To The Present. *Journal of the Royal Anthropological Institute*, *8*(2), 279-309. https://doi.org/10.1111/1467-9655.00109

Streubert-Speziale, H. J., & Carpenter, D. R. (2007). Designing data generation and management strategies. *Qualitative research in nursing: Advancing the humanistic imperative*, *4*, 35-56.

Szűcs, A., Janszky, J., Hollo, A., Migléczi, G., & Halász, P. (2003). Misleading hallucinations in unrecognized narcolepsy. *Acta Psychiatrica Scandinavica*, *108*(4), 314-317.

Taitimu, M., Read, J., & McIntosh, T. (2018). Ngā Whakāwhitinga (standing at the crossroads): How Māori understand what Western psychiatry calls "schizophrenia". *Transcultural psychiatry*, *55*(2), 153-177.

Takeuchi, N., Mukai, M., Uchimura, N., Satomura, T., Sakamoto, T., & Maeda, H. (2000). A narcoleptic patient exhibiting hallucinations and delusion. *Psychiatry and Clinical Neurosciences*, *54*(3), 321-322.

Takeuchi, T., Fukuda, K., Sasaki, Y., Inugami, M., & Murphy, T. I. (2002). Factors related to the occurrence of isolated sleep paralysis elicited during a multi-phasic sleep-wake schedule. *Sleep*, *25*(1), 89-96.

Takeuchi, T., Miyasita, A., Sasaki, Y., Inugami, M., & Fukuda, K. (1992). Isolated sleep paralysis elicited by sleep interruption. *Sleep*, *15*(3), 217-225.

Timoti, P., Lyver, P. O. B., Matamua, R., Jones, C. J., & Tahi, B. L. (2017). A representation of a Tuawhenua worldview guides environmental conservation. *Ecology and Society*, *22*(4).

Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of advanced nursing*, *48*(4), 388-396.

Toso, V. M. (2011). Reconceptualising spirituality as a philosophy of practice for Pasifika early childhood education in New Zealand: A Samoan Perspective. *Pacific-Asian Education Journal*, *23*(2).

Valentine, H., Tassell-Mataamua, N., & Flett, R. (2017). Whakairia ki runga: The many dimensions of wairua. *New Zealand Journal of Psychology (Online)*, *46*(3), 64-71.

Verghese, A. (2008). Spirituality and mental health. *Indian Journal of Psychiatry*, *50*(4), 233.

Vieten, C., Scammell, S., Pilato, R., Ammondson, I., Pargament, K. I., & Lukoff, D. (2013). Spiritual and religious competencies for psychologists. *Psychology of Religion and Spirituality*, *5*(3), 129.

Vyse, S. (2005). PSYCHOLOGY: The Outer Limits of Belief. *Science*, *310*, 1280-1281. https://doi.org/10.1126/science.1121309

Waitoki, W., Dudgeon, P., & Nikora, L. W. (2018). Indigenous psychology in Aotearoa/New Zealand and Australia. *Global psychologies: Mental health and the global South*, 163-184.

Wilcox, J. (1985). Psychopathology and narcolepsy. *Neuropsychobiology*, *14*(4), 170-172.

Wing, Y.-K., Lee, S. T., & Chen, C.-N. (1994). Sleep paralysis in Chinese: Ghost oppression phenomenon in Hong Kong. *Sleep*, *17*(7), 609-613.

Wing, Y. K., Chiu, H., Leung, T., & Ng, J. (1999). Sleep paralysis in the elderly. *Journal of Sleep Research*, *8*(2), 151-155. https://doi.org/10.1046/j.1365-2869.1999.00143.x

Wojnar, D. M., & Swanson, K. M. (2007). Phenomenology: an exploration. *Journal of holistic nursing*, *25*(3), 172-180.

Woollacott, M., & Shumway-Cook, A. (2020). The Mystical Experience and Its Neural Correlates. *Journal of Near-Death Studies*, *38*(1).

Wright, D. (1994). Initial findings of the abduction transcription project. *Mufon UFO Journal*(310), 3-7.

Wróbel-Knybel, P., Flis, M., Dubiel, R., & Karakuła-Juchnowicz, H. (2018). What do we know about sleep paralysis? *Current Problems of Psychiatry*, *19*(3), 174-184. https://doi.org/10.2478/cpp-2018-0014

Yeung, A., Xu, Y., & Chang, D. F. (2005). Prevalence and Illness Beliefs of Sleep Paralysis among Chinese Psychiatric Patients in China and the United States. *Transcultural psychiatry*, *42*(1), 135-145. https://doi.org/10.1177/1363461505050725

Yoshimura, A. (2015). To believe and not to believe: A native ethnography of Kanashibari in Japan. *Journal of American Folklore*, *128*(508), 146-148.

Young, E., Xiong, S., Finn, L., & Young, T. (2013). Unique sleep disorders profile of a population-based sample of 747 Hmong immigrants in Wisconsin. *Social Science & Medicine*, *79*, 57-65. https://doi.org/10.1016/j.socscimed.2012.06.009

Zhang, Y., & Wildemuth, B. M. (2009). Unstructured interviews. *Applications of social research methods to questions in information and library science*, 222-231.

Zuckerman, P. (2008). Society without god. In *Society without God*. new york university Press.

Appendix A Social Media Advertisement

Kia ora,

My name is Francesca, a postgraduate student of the School of Psychology at Massey University. I am currently conducting explorative research into how Aotearoa New Zealanders understand the experience, commonly referred to as “Sleep Paralysis”.

This experience is recognised differently all over the world and comes with many different names and understandings. Key features of the experience include:

- An inability to move or speak upon waking up or falling asleep
- Pressure upon your chest
- Feeling the presense of someone (or something) in the room
- A sense of fear or panic

If you have experienced sleep paralysis on at least one occasion and would like to take part in the current study, please get in contact through either Facebook Messenger or email at: [redacted]

Appendix B Study Information Sheet

Interpretations of Sleep Paralysis: A New Zealand Sample

NGĀ KUPU WHAKAMĀRAMA / INFORMATION SHEET

He aha te kaupapa o tēnei rangahau? / What is this research about?

An experience commonly referred to as "sleep paralysis" is when you cannot move or speak upon waking up or falling asleep. Episodes of sleep paralysis can last for a few seconds to two minutes, however, can often feel much longer.

You may also experience:

- Pressure on your chest
- Feeling the presence of someone (or something) in the room
- A sense of fear or panic

Despite the diversity of understandings that surround this experience, very little research has been done to explore the phenomenon within Aotearoa New Zealand. In order to identify how individuals understand this experience, I am conducting an exploratory study in to how sleep paralysis is interpreted by Aotearoa New Zealanders.

Ma wai e mahi tēnei rangahau? / Who is doing this research?

My name is Francesca Sullivan, a postgraduate student at the School of Psychology, Massey University. Dr Nicole Lindsay is the supervising staff member who is an experienced qualitative researcher across numerous diverse areas. The current research will contribute to the requirements of a Master of Science degree.

He aha āku mahi mā ngā kairangahau? / What will I be asked to do?

If you do decide to participate, I will organise an interview via Zoom or in-person, depending on what suits you. Prior to the interview, I will provide a consent form for you to complete. You are welcome to ask myself or my supervisor any questions regarding the project, we will be happy to clarify information further for you if needed.

Please know that your participation is ***completely voluntary*** – if you do not want to participate, your decision will be respected. You may also choose to:

- Stop participating at any time prior to the interview phase
- Withdraw your data up to two weeks following the interview

Should you decide to take part, I will ask a series of open-ended questions regarding your experience/s. The interview will take place at a destination of your choosing, locations may include: a public space or in your home via Zoom. The interview will be audio recorded and later transcribed.

It is anticipated that the interview will take approximately 60-minutes. As a thank-you for your valuable role in the current project, you will receive a koha of $40.

Ma wai ngā tāngata e whai wāhi tēnei rangahau? / Who can take part in this research?

To participate in the current study, you must have experienced sleep paralysis on at least one occasion and be 16 years of age or over. If you have any questions in regard to eligibility, you are welcome to contact me.

He aha ōku mōtika? / What are my rights as a participant?

You are under no obligation to accept this invitation and will be provided with sufficient time to make your decision. If you do choose to participate, you have the right to skip or decline to answer a particular question. You are not required to answer anything you are not comfortable with sharing.

Additionally, you are welcome to contact me if you have any queries. Your interview transcript will remain completely anonymous and name changes will occur during the write-up phase. All raw data, such as consent forms and audio recordings, will be kept securely on a password-protected computer. Data security will adhere to the Massey University Code of Responsible Research Conduct. Raw data will be destroyed at the completion of the thesis, in February next year.

As an explorative piece of research, the data generated from this study may be helpful for other researchers wishing to build upon the study. Although your information will remain completely anonymous, de-identified data may be shared within other forums. This may include academic journals, digital research archives and relevant conferences.

Mēnā he pātai āku, mā wai aku pātai e whakautu? / Who can I contact about the research?

If you have any further questions or would like to know more about this study, please get in contact with either Francesca or Nicole:

Primary Investigator:

Francesca Sullivan

School of Psychology

Massey University, Albany

[redacted]

Research Supervisor:

Nicole Lindsay, PhD

School of Psychology

Massey University, Palmerston North

n.lindsay1@massey.ac.nz

Rōpū tautoko / Support organisations:

If you feel that this research has raised any issues or feelings of distress, please don't hesitate to reach out to Francesca. Provided below are a range of support services available to you if required:

Need to talk? Free call or text 1737 any time.

Talk to a trained counsellor or call:

Depression helpline – 0800 111 757

Alcohol drug helpline – 0800 787 797

Healthline – 0800 611 116 – to get help from a registered nurse 24/7

Lifeline – 0800 543 354

Samaritans – 0800 726 666

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 22/17. If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email humanethicsoutha@massey.ac.nz.

Appendix C Participant Consent Form

Interpretations of Sleep Paralysis: A New Zealand Sample

PARTICIPANT CONSENT FORM

I have read and understand the Information Sheet attached as Appendix I. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary. I understand that I can withdraw from the study up to two-weeks following the interview.

1. I agree to the interview being sound recorded.
2. I agree to participate in this study under the conditions set out in the Information Sheet.
3. I agree to future archiving and sharing of de-identifiable data.

Declaration by Participant:

I _____ hereby consent to take part in this study.

Signature: _____ Date: _____

Appendix D Interview Schedule

Sleep Paralysis Interview Prompts

- How old were you when you first experienced sleep paralysis?
- Can you describe what occurred in your experience of sleep paralysis?
- How did you feel about your experience?
- What did you do following your experience?
- Do you believe that your experience had an underlying cause or meaning, or not?
- Why do you think the experience/s occurred at the time/s it did?
- Did you tell anyone about your experience? If so, who did you tell and how did they respond?
- If not, why not?
- Did you seek advice regarding your experience?
- If advice was sought, what did you think and feel about the recommendations you received? Did they align with what you believe would address the root cause?
- In regard to who you sought advice from: Do you think the person saw the experience in the same way you did? If so, what was similar? If not, what was different?
- Have you developed any techniques to manage your sleep paralysis?
- What aspects of the experience do you believe were the most significant?
- Do you think the name “Sleep Paralysis” most accurately describes the experience?